BULLETIN OF ZOOLOGICAL NOMENCLATURE

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Notices

(1) Applications and correspondence relating to applications to the Commission should be sent to the Executive Secretary at the address given on the inside of the front cover and on the Commission website. English is the official language of the *Bulletin*. Please take careful note of instructions to authors (present in a one or two page form in each volume and available online (at http://iczn.org/content/guidelines-case-preparation) as incorrectly formatted applications will be returned to authors for revision. The Commission's Secretariat will answer general nomenclatural (as opposed to purely taxonomic) enquiries and assist with the formulation of applications and, as far as it can, check the main nomenclatural references in applications. Correspondence should be sent by e-mail to 'iczn@nhm.ac.uk' where possible.

(2) The Commission votes on applications eight months after they have been published, although this period is normally extended to enable comments to be submitted. Comments for publication relating to applications (either in support or against, or offering alternative solutions) should be submitted as soon as possible. Comments may be edited (see instructions for submission of comments at http://iczn.org/content/instructions-comments).

(3) Requests for help and advice on the Code can be made direct to the Commission and other interested parties via the Internet. Membership of the Commission's Discussion List is free of charge. You can subscribe and find out more about the list at http://list.afriherp.org/mailman/listinfo/iczn-list.

(4) The Commission also welcomes the submission of general-interest articles on nomenclatural themes or nomenclatural notes on particular issues. These may deal with taxonomy, but should be mainly nomenclatural in content. Articles and notes should be sent to the Executive Secretary.

New applications to the Commission

The following new applications have been received since the last issue of the *Bulletin* (volume 68, part 3, 30 September 2011) went to press. Under Article 82 of the Code, the existing usage of names in the applications is to be maintained until the Commission's rulings on the applications (the Opinions) have been published.

CASE 3576: *Oscinella* Becker, 1909 (Insecta, Diptera, CHLOROPIDAE): proposed conservation by giving it precedence over *Melanochaeta* Bezzi, 1906 and *Pachychaetina* Hendel, 1907. M. von Tschirnhaus & E.P. Nartshuk.

CASE 3577: ELATERIDAE Leach, 1815 (Insecta, Coleoptera): proposed precedence over CEBRIONIDAE Latreille, 1802. P.J. Johnson.

CASE 3578: *Copromyza fenestralis* Fallén, 1820 (currently *Pteremis fenestralis*; Insecta, Diptera, SPHAEROCERIDAE): proposed conservation of usage by suppression of syntypes and designation of neotype. J. Roháček.

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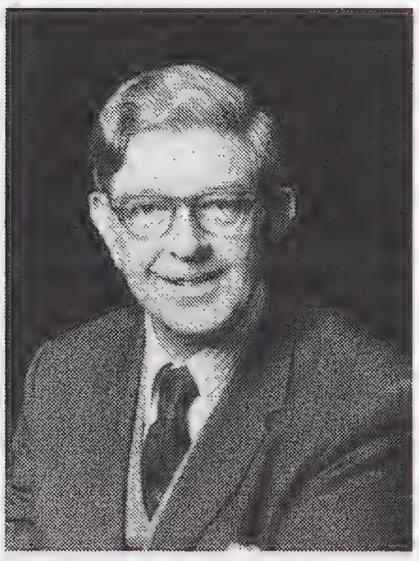
CASE 3579: *Scarabaeus fimetarius* Linnaeus, 1758 (Insecta, Coleoptera): proposed setting aside of the lectotype and designation of a neotype. R.B. Angus, C.J. Wilson & F.-T. Krell.



William David Lindsay Ride (1926–2011) – Commissioner 1963–2001, Chairman of the Editorial Committees for the 3rd and 4th Editions of the Code, President of the International Commission on Zoological Nomenclature in 1973–1977 & 1983–1989

W.D.L. Ride, a member of the International Commission on Zoological Nomenclature between 1963 and 2001, died in Australia on 6 November 2011. He served as President of the Commission from 1973 to 1977 and again from 1983 to 1989. His wide experience of public administration is credited by Melville (1995) as providing the successful bridge for the Commission to become a member of the IUBS (International Union of Biological Sciences) which has delegated the authority for the Commission as a representative international scientific body after the demise of the Congress of Zoology in 1972. He was further recognised for his considerable experience in drafting policy, which set the foundations for his chairmanship of the Editorial Committees for both the third and fourth editions of the Code. David Ride contributed significantly to nomenclature, with his extensive service to the Commission, his publications of papers on the topic and guidance of the Commission through times of major transition over several decades.

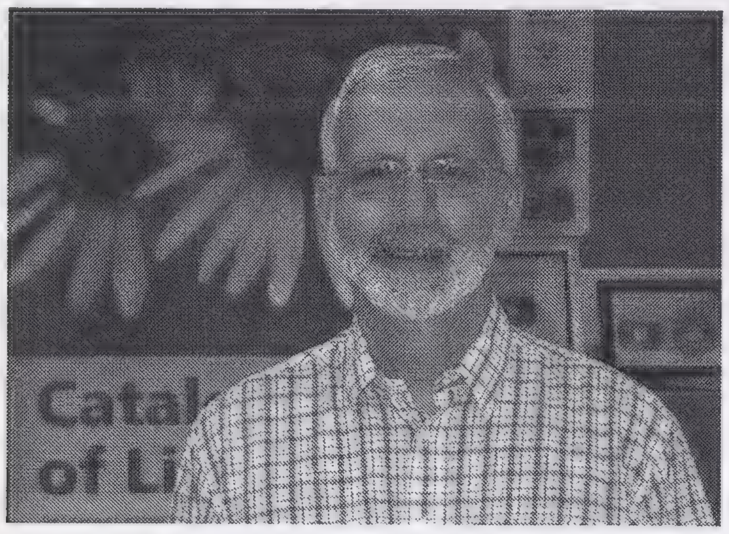
David Ride was a mammalogist and palaeontologist who had studied at the renowned Oxford school in vertebrate anatomy under E.S Goodrich. He published on the native mammals of Australia, and co-authored an index to the genera and species of fossil mammals described from Australia and New Guinea. He edited volumes on biological nomenclature and on endangered species in Australia.

His professional career included extensive influence in Australian museums and academics. He became Director of the Western Australian Museum, Perth in 1957, at the same time he held the position of Reader in Zoology at the University of Western Australia. Jose I. dos R. Furtado, now a senior member of the International Trust for Zoological Nomenclature (ITZN), was an undergraduate at the University of Western Australia when Ride first took up his positions in Perth, and remembers Professor Ride as an inspiring teacher of vertebrate biology who brought evolutionary biology to life by integrating structure with function.

Professor Ride worked for the Australian Biological Resources Study, located within the Commonwealth Scientific and Industrial Research Organisation (CSIRO), in Canberra from 1974 to1980, and was Director in 1975. He also served as the Head of the School of Applied Science, Canberra College of Advanced Education from 1982–87, and was appointed Principal of the College in 1987. Following his retirement, he became a Visiting Fellow at the Australian National University until 2002. Professor Ride was made a Member of the Order of Australia, an Australian order of chivalry, in 1984.

David Ride's contributions to zoological nomenclature were monumental and live on in the legacy of the Code. The Commissioners and Members of the Trust extend sincere condolences to his family and friends.

Melville, R.V. 1995. Towards stability in the names of animals: A history of the International Commission on Zoological Nomenclature 1895–1995. 92 pp. ITZN, London.



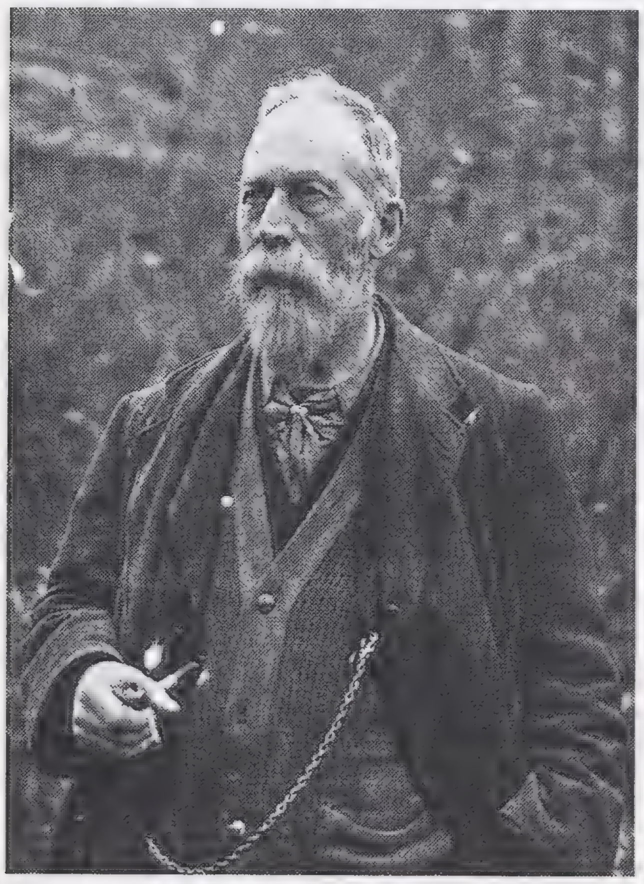
Professor Frank A. Bisby (1945–2011), Director Catalogue of Life and Species 2000

Frank A. Bisby was the initiator and director of the Catalogue of Life and Species 2000, and several other major biodiversity informatics projects that were closely linked with the work of the ICZN. He died unexpectedly on 25 October, the day after the announcement of the release of the 2011 edition of the Catalogue of Life (CoL). This dynamic database lists 1,370,276 species (with 'accepted names' and limited synonymies) sourced from 101 databases that are validated by taxonomic specialists. It is widely seen as the most complete taxonomic e-infrastructure project for living organisms today. Frank was keen on collaboration with the ICZN and worked to ensure that the nomenclatural authority that will be available through ZooBank is linked with the taxon concepts presented in CoL.

Frank Bisby was also Professor of Botany at Reading University, U.K. with a speciality in legumes. He was an inspirational teacher, who was particularly popular for his field courses. He had moved to Reading from a faculty position at Southampton University after finishing his PhD at Oxford.

Frank Bisby was a leader with vision, bringing together teams of people to contribute skills in a global endeavour of cataloguing the world's species. His contributions were enormous and he will be missed.

Anchoring Biodiversity Information: From Sherborn to the 21st century and beyond



Charles Davies Sherborn provided the bibliographic foundation for current zoological nomenclature with his magnum opus *Index Animalium*. In the 43 years he spent working on this extraordinary resource, he anchored our understanding of animal diversity through the published scientific record. No work has equalled it since and it is still in current, and critical, use.

Until now, Sherborn's contribution has been recognised and relied upon by professional taxonomists worldwide but he has escaped the celebration of his accomplishment that is his due. This changed on Friday, 28 October 2011, with a symposium in his honour in the 150th year of his birth organised by the

ICZN, in collaboration with the Society for the History of Natural History at the Natural History Museum (NHM), London. The full day meeting included an international panel of experts on bibliography and biodiversity bioinformatics who linked a view of the past with an active debate on the future of the related fields.

The symposium was structured with an introduction to Sherborn as a man, scientist and bibliographer, then provided historical context for taxonomic indexing from the 19th century to today. Current tools and innovations were presented. The final sessions tackled the future of biological nomenclature, including shifting publishing modes and changing sociology of science in taxonomy. There were fifteen talks from distinguished speakers from around the world, and ten posters, including an exhibition of 'Sherborniana', or artefacts from Sherborn's tenure at the NHM. The event was very well attended, with an audience of over 120 people present throughout most of the day. As the composition of the audience changed somewhat throughout the day, the number of people celebrating Sherborn was impressive.

The symposium was dedicated to Professor Frank Bisby, whose untimely death a few days earlier had shocked and saddened the biodiversity informatics community. Frank had initiated and directed Species 2000 and the Catalogue of Life, ambitious global taxonomy projects that build on the foundation laid by Sherborn's indexes.

The global and temporal reach of this event is being extended through podcasts of all the talks, posters and discussion, including slides and poster downloads, and videos of all the talks available through this site: iczn.org/sherborn and http://backdoorbroadcasting.net/2011/10/anchoring-biodiversity-information-from-sherborn-to-the-21st-century-and-beyond/.

The event was organised and sponsored by the ICZN (Int'l Commission on Zoological Nomenclature) and the Society for the History of Natural History, with significant sponsorship support from the Linnean Society, BHL-Europe (Biodiversity Heritage Library-Europe), Pensoft Publishers (*ZooKeys*), The NHM – Natural History Museum, and ViBRANT – Virtual Biodiversity.

The inaugural plenary talk was given by Neal Evenhuis, who provided personal and highly sympathetic insights into the incredible drive and bibliographic skills Sherborn had to harness in his effort to make an essentially universal index to all animal names. Evenhuis served as a Commissioner and President of the ICZN for many years, and is a self-described 'index-aholic' whose wit made Sherborn's labours seem a natural endeavour, at least for those of a Herculean mindset. Gordon McOuat provided a sparkling overview of the evolution of nomenclatural codes and controversies in the decades around Sherborn, bringing the history of science to life. Edward Dickinson presented a detailed scrutiny of Sherborn and Richmond's indexes in ornithology, a taxonomic best-case that illuminates problems that need attention in the larger whole of the corpus. Chris Thompson explained how research on the important (and beautiful!) megadiverse insect group Diptera has benefited from building an outstanding bibliographic index based on Sherborn's original work, with modern tools and additions providing a resource of greater utility than even Sherborn could have imagined. Suzanne Pilsk, with extraordinary zing, described how the Smithsonian libraries have made Sherborn's *Index Animalium* accessible online and how this is the dawn of a new age for bibliographic information access as we go from paper to bytes. This was followed by a companion talk from Nigel Robinson, who showed how Zoological Record's *Index of Organism Names* integrated *Index Animalium* in collaboration with the Smithsonian libraries, creating a continuously updated bibliographic source for published names.

The session covering current practice in bringing information into the modern age began with Chris Lyal's pertinent observations on limitations of digitizing objects and information. Lyal underscored our current tendency to build forward from the past, using e-charged traditional methods with digital analogues of paper, rather than developing new tools that make the most of cybertechnology and assessment of future needs and opportunities. Henning Scholz gave a thorough overview of the monumental resource that the Biodiversity Heritage Library (BHL) has become, increasing the efficiency of access to early published literature and increasing archival stability for historical works. David Remsen showed how GBIF's (the Global Biodiversity Information Facility) 300 million records are linked through nomenclatural and taxonomic authority files, thus is an expansion on Sherborn's dream. In a tectonic talk presenting results of ICZN committee deliberation, Daphne Fautin, with Miguel Alonso-Zarazaga, detailed the requirements and opportunities for Lists of Available Names (LANs) to proceed through ICZN Article 79 to stabilise large taxonomic sections of nomenclature at once. Although it is not a light task to implement a LAN, a result is that 'nomenclatural archaeology' will find the footing pulled out from under it, thus increasing stability and transparency in scientific names of animals.

In the final session Chris Freeland showed how museums and libraries are enhancing educational outreach, scholarly dissemination and archiving by pursuing a focused programme to make information electronic. Despite a volatile technology landscape, progress in scanning prints, manuscripts and specimens has been prodigious and benefits are irrefutable. Sandra Knapp got back to the source, suggesting that evolution or revolution is necessary to change the way taxonomists work and how we compile the 'definitive references'. Knapp emphasised that modern tools allow, indeed require, the modern equivalent of the monograph to be broader and richer in data content and more regularly updated, and that the role of the taxonomist must become as a collaborative partner, not sole executer, in these works. Lyubomir Penev followed this with a very practical glimpse of what revolutionary e-tools look like, presenting the new work flow and publishing mechanism developed by the journal *ZooKeys*. He pointed out that technical tools can radically change the landscape for the persistent, intractable controversies of registration and e-publication across all biological nomenclature. Rod Page took no prisoners with his manifesto for a truly 'open taxonomy'. His criticism that taxonomy today is only marginally open, not really digital and not notably linked was followed by suggestions of ways this could change with concerted focus and shared vision from the taxonomic and bibliographic community.

The wrap-up plenary by Richard Pyle made a convincing case that, even in this time of major technological improvements across taxonomic science, the most revolutionary change is the means by which we manage and communicate information to the world. Pyle showed how a multitude of major taxonomic resources are all linked through taxonomy and nomenclature. The granddaddy of all the taxonomy projects, where it all comes home, is the GNA (Global Names Architecture), which will be the dynamic index to interconnect and streamline the entire taxonomic enterprise. Finally, a panel discussion was held under the banner 'What Would

Fig. 1. Anchoring Biodiversity Information: From Sherborn to the 21st century and beyond (1) Graham Higley, Head of NHM Libraries & Archives and BHL Chair, dedicates the symposium to Professor Frank Bisby, whose untimely death a few days before shocked the biodiversity informatics community; (2) Neal Evenhuis presents an insightful plenary on the mind of an indexer, with a cartoon drawn by Sherborn in the background showing his exhaustion at the end of his Herculean task; (3) Daphne Fautin and Miguel Alonso-Zarazaga present the results of ICZN Committee deliberation on Lists of Available Names (LANs, Article 79) with a graphic indicating the tension between taxonomic and purely nomenclatural inclusiveness of LANs; (4) Suzanne Pilsk describes the bibliographic and informatics challenges of getting Sherborn's *Index Animalium* online; (5) Chris Freeland puts Sherborn in his crystal ball for the future of biodiversity publishing; (6) Richard Pyle raises a fist in support of Global Names Architecture, showing how taxonomy and names are the nexus for all biodiversity information in his closing plenary talk; (7) Chris Thompson fires another fierce and insightful question; (8) the full panel of speakers under the heading **WWSD? What would Sherborn Do?** From left to right: Suzanne Pilsk, Chris Lyal, Henning Scholz, Edward Dickinson, Neil Evenhuis, Daphne Fautin, Sandy Knapp, Lyubomir Penev, Rod Page, Chris Thompson, Chris Freeland, Gordon McOuat, (behind podium Richard Pyle, David Remsen).

Sherborn Do?' with all the speakers taking questions from the audience. This provided a lively debate on the importance of names, the role of publishing and the future for scientific bibliography. It was agreed that we have powerful new tools at our disposal, but the major challenge for the future is the required sociological shifts in how taxonomists work and how information is presented. Sherborn would have been proud.

Introduction to the Programme, Dedication to Frank Bisby

Ellinor Michel (ICZN) & Graham Higley (BHL & NHM Libraries)

Session 1: History of Taxonomic Literature, Indexing and Traditional Taxonomic Nomenclature

Opening Keynote: SHNH Annual Ramsbottom Lecture Neal Evenhuis (Bishop Museum): *Sherborn: Work history and impact of bibliography, dating and zoological informatics*

Gordon McOuat (University of King's College, Halifax): *Sherborn's context: Cataloguing nature*

Edward Dickinson (Aves Press): *Reinforcing the foundations: Filling in the bibliographic gaps in the historical legacy*

F. Christian Thompson (Smithsonian) & Thomas Pape (Copenhagen): *Systema Dipterorum: Sherborn's critical influence in getting information control over a megadiverse group*

Smithsonian Institution Libraries (Suzanne Pilsk, Martin Kalfatovic & Joel Richard): *Unlocking the Index Animalium: From paper slips to bytes and bits*

Nigel Robinson (Zoological Record) *Sherborn's Index Animalium integration into ION: access to all*

Session 2: Current Taxonomic Practices

Chris Lyal (NHM): *Digitising legacy taxonomic literature: processes, products and using the output*

Henning Scholz (Museum für Naturkunde Berlin): *BHL-Europe: Tools and Services for Legacy Taxonomic Literature*

David Remsen (GBIF): *Biodiversity Informatics: GBIF's role in linking information through scientific names*

Daphne Fautin (Univ. Kansas/ICZN) & Miguel Alonso-Zarazaga (MNCN-CSIC/ICZN): *LANs: Lists of Available Names – a new generation for stable taxonomic names in zoology?*

Session 3: Future of Biological Nomenclature

Chris Freeland (Missouri Botanical Garden): *Preserving digitized taxonomic data: problems and solutions for print, manuscript and specimen data*

Sandra Knapp (NHM/IAPT/ITZN): *New workflows for describing and naming organisms*

Lyubomir Penev (Pensoft Publishers): *ZooKeys: Streamlining the registration-to-publication pipeline*

Rod Page (University of Glasgow): *Towards an open taxonomy*

Closing Keynote and wrap-up plenary discussion. Richard Pyle (Bishop Museum): *Towards a Global Names Architecture: The future of indexing scientific names*

ICZN meeting on electronic publication

A public meeting to discuss the proposed amendment on electronic (e-) publication was held following the Sherborn symposium on Saturday 29 October, 2011 in the Natural History Museum, London. Approximately 30 taxonomists, librarians and publishers attended, including eight current Commissioners (Alonso-Zarazaga, Bogutskaya, Fautin, Krell, Pape, Rosenberg, van Tol, Winston) and one ex-Commissioner and member of the 4th Code Editorial Committee (Thompson). Authors of the most strongly argued published Comments on e-publication, both pro and con, were present. The meeting was chaired by Ellinor Michel, ICZN Executive Secretary and Gary Rosenberg, Chair of the 5th Code Editorial Committee. The meeting began with a presentation from Sandra Knapp, Chair of the Botanical Nomenclature Committee and ITZN Member (Trustee), on how e-publication was debated and voted through in the Botanical Congress in Melbourne in July of this year. Details of how e-publication should or should not be implemented in zoology were then discussed vigorously by all attending until a break after three hours. The discussion was wide-ranging and passionate. On reconvening, the group maintained its breadth of representation though with numbers slightly reduced. After a short period at the start of the meeting that might be described informally as a bun fight, discussion was respectful and very constructive. A focused set of questions for the Commission resulted.

Straw votes were taken on summary statements from the discussion, with the following results:

Should registration in an official register and e-publication be mandatorily coupled (with the proviso that there is a working registration mechanism, such as ZooBank)?

YES: 13, NO: 8, ABSTAIN: 3

Is this the time to recognise e-publication for nomenclatural acts? (Or stated in other words, whatever the mechanism, are we in favour of working towards a way to allow e-publication?)

YES: 23, NO: 1, ABSTAIN: 1

Should we aim for Jan 2012 as the start date for allowing e-publication regardless of the status of registration (with a retroactive implementation if the e-publication amendment passes due to the required voting period)?

YES: 20, NO: 1, ABSTAIN: 0

The group made several suggestions of items for the Commission to consider in revising the amendment for e-publication in preparation for a vote:

(1) Is it consistent with the principles of the amendment to have that the proposed changes in Article 8 & 9 be voted on separately from those in Article 10? The Commission was requested to address this as a purely procedural question. The content of Articles 8 and 9 (on publishing and archiving) was felt to be far less problematic than that of 10 (on registration), especially as ZooBank remains an unproven, though promising, infrastructure of scale.

(2) Is it consistent with the principles of the amendment to have staggered start dates, with a later start date for registration than for e-publication? The group agreed that it should be left open for the Commission to decide when registration is ready, and this should be independent of e-publication for the time being.

(3) Mechanisms for how and when to move registration forward need to be addressed as a matter of priority.

(4) Should having an ISBN or ISSN be added as a requirement for the availability of an electronic work (as done in Botany)?

(5) The proposals drafted for the e-publication discussion by the botanists were considered to be well-thought out in general (Chapman, A.D., Turland, N.J. & Watson, M.F. 2010. Report of the Special Committee on Electronic Publication. *Taxon*, **59**(6): 1853–1862) and should be considered in detail by the ICZN Commissioners.

(6) Recommendation 8C was felt to be problematic in two ways: 1) it combines two logically separate recommendations; and 2) the first of these '*Ideally names and nomenclatural acts published in electronic works should also be published simultaneously on paper.*' conveys that electronic publication is 'second class', and also will result in the creation of two competing simultaneous versions, from which it will be difficult to choose a single version of record. One solution would be just to delete the first half so that it reads:

Recommendation ***8C. Electronic works.*** *Electronic works should be structured to allow automated indexing and data extraction.*

INTERNATIONAL TRUST FOR ZOOLOGICAL NOMENCLATURE

Financial Report for the year 2010

The main work of the Commission during the year was on applications from zoologists in 24 countries to resolve problems of zoological nomenclature. These were published in the *Bulletin of Zoological Nomenclature*, together with Opinions (rulings) made by the Commission on other cases. Further applications were under consideration. Advice was given by the Commission's Secretariat in response to a large number of enquiries on matters of nomenclature from zoologists worldwide.

Total income received by the Trust consisted of £32,835 for all publications produced by the Commission, £50,586 from appeal and general donations, £2,774 in bank interest and investment income, and £15,542 capital gain on the sale of investments and £6,988 from special events and lecture fees bringing the total income for the year to £108,725.

Expenditure in 2010 was £99,917 on salaries and fees of the Secretariat of the Commission, £2,918 on appeal expenditure and ZooBank travel, £8,206 for printing the *Bulletin of Zoological Nomenclature* and for the distribution of all publications, and £972 for office expenses and depreciation of office equipment, bringing the total expenditure to £112,013.

The Secretariat of the Commission was again housed in the Natural History Museum, London, whom we thank for their continuing support. The Trust wishes to express its thanks to all the donors listed below who have contributed to the continuation of its work during the year for the international zoological and palaeontological community.

Donations and grants were received from:

American Association of Zoological Nomenclature
Canadian Society of Zoologists
Coleopterists' Society
The Earl of Cranbrook
Entomological Society of America
Institute Royale des Sciences Naturales de Belgique, Brussels
Japanese Society of Systematic Zoology
Kongelige Danske Videnskabernes Selskab
Peter Luff
Malacological Society of London
Muséum National d'Histoire Naturelle, Paris
NCB Naturalis, the Netherlands Centre for Biodiversity, Leiden
Pan-European Species-directories Infrastructure (PESI)
Senckenberg Gesellschaft für Naturforschung, Frankfurt
University of Oslo
University of Reading (4D4Life)
Peter T. Warren
Baroness Young of Old Scone
Donors to the marathon run by Justin Warhurst on behalf of the ICZN

C. Laws, Secretary and Managing Director

INTERNATIONAL TRUST FOR ZOOLOGICAL NOMENCLATURE

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2010

Income		
SALE OF PUBLICATIONS		
Bulletin of Zoological Nomenclature	£32,250	
International Code of Zoological Nomenclature	456	
Official Lists and Indexes	100	
Centenary History	29	
	32,835	
GRANTS AND DONATIONS		50,586
INTEREST RECEIVED		5
INVESTMENT INCOME		2,769
CAPITAL GAIN ON SALE OF INVESTMENTS		15,542
SPECIAL EVENTS		6,638
LECTURE FEES		350
		108,725
Expenditure		
SALARIES, NATIONAL INSURANCE AND FEES		99,917
OFFICE EXPENSES		972
PRINTING OF BULLETIN AND DISTRIBUTION OF PUBLICATIONS		8,206
APPEAL EXPENDITURE INCLUDING TRAVEL		2,918
		112,013
DEFICIT FOR THE YEAR CARRIED TO BALANCE SHEET		(£3,288)

Case 3567

Bulimus lineatus Bruguière, 1789 (Gastropoda, UROCOPTIDAE; currently *Macroceramus lineatus*) and *Bulimus lineatus* Draparnaud, 1801 (Gastropoda, ACICULIDAE; currently *Acicula lineata*): proposed conservation of specific names

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Abstract. The purpose of this application, under Articles 23.9.5, 23.10, 57.2.2 and 81 of the Code, is to conserve two specific gastropod names *Bulimus lineatus* Bruguière, 1789 (Pulmonata: UROCOPTIDAE, currently *Macroceramus lineatus*, from Haiti) and *Bulimus lineatus* Draparnaud, 1801 (currently *Acicula lineata*, Caenogastropoda: ACICULIDAE, from central Europe) by ruling under the plenary power to disregard their primary homonymy.

Keywords. Nomenclature; taxonomy; Gastropoda; UROCOPTIDAE; ACICULIDAE; *Macroceramus lineatus*; *Acicula lineata*; caenogastropods; stylommatophoran pulmonate snails; Europe; Haiti.

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1. *Bulimus lineatus* Bruguière, 1789 (in Bruguière, 1792, p. 323; Gastropoda, UROCOPTIDAE, currently *Macroceramus lineatus*, from Haiti) and *Bulimus lineatus* Draparnaud, 1801 (p. 67; Gastropoda, ACICULIDAE, currently *Acicula lineata*, from Europe) are primary homonyms (Articles 53.3, 57.2 of the Code). The identities of both nominal taxa are not disputed.

2. Both names are currently used for 'valid' species. *Acicula lineata* is a frequent and important species from Europe, where it is distributed from southern France to southern Germany and eastern Austria (Boeters et al., 1989, p. 60, Falkner et al., 2002, p. 69). It is the type species of *Acicula* Hartmann, 1821 (ACICULIDAE). *Macroceramus lineatus* is a common species in Haiti (Pilsbry, 1904, p. 122, Wetherbee & Clench, 1984, p. 10, Richardson, 1991, p. 145).

3. These two species have not been considered as congeneric after 1899. They belong to different taxonomic groups: *Acicula* Hartmann, 1821 is a caenogastropod, while *Macroceramus* Guilding, 1828, a stylommatophoran pulmonate snail. These genera live in different regions without overlap: *Macroceramus* in Mexico, Central America and the Caribbean, *Acicula* in Europe, the Caucasian region and northern Africa.

4. Because *Acicula lineata* was considered a very important species, Falkner et al. (2002, p. 69) intended to fix *Bulimus lineatus* Bruguière, 1789 as a nomen oblitum under Article 23.9.2, and listed the 25 references for *Acicula lineata* as required by Article 23.9.1.2. The authors argued that *Bulimus lineatus* Bruguière, 1789 had not been used since 1899, but overlooked the fact that the name had been used by Pilsbry (1904, p. 122) and subsequent authors in the genus *Macroceramus*. Terrestrial

gastropod species from Haiti are much more rarely mentioned in the recent literature and internet resources than species from central Europe, which explains why its usage was not detected in 2002.

5. Since the action of Falkner et al. (2002) was taken in error, the case has to be referred to the Commission under Article 23.10, and it is proposed to conserve the names under Article 23.9.5 of the Code.

6. Boeters et al. (1989, p. 60) argued that Draparnaud (1805, p. 57) established *Auricula lineata* as a new species, and that the 1801 name could be suppressed to avoid homonymy with *Bulimus lineatus* Bruguière, 1789. However Draparnaud (1805) had expressly used the 1801 name, so this option would have created confusion in Europe and was rejected by subsequent authors (Falkner et al., 2002).

7. It is proposed to disregard the primary homonymy and regard both names as available. An alternative solution would be to suppress the Haitian name, because the European name has been used more frequently. However, for students and scientists in Haiti suppression of the Haitian name may result in further confusion.

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to rule that the name *lineatus* Draparnaud, 1801, as published in the binomen *Bulimus lineatus*, is not invalid by reason of being a junior primary homonym of *lineatus* Bruguière, 1789, as published in the binomen *Bulimus lineatus*;

(2) to place on the Official List of Specific Names in Zoology the following names:
   (a) *lineatus* Bruguière, 1789, as published in the binomen *Bulimus lineatus*;
   (b) *lineatus* Draparnaud, 1801, as published in the binomen *Bulimus lineatus*, with the endorsement that is not invalid by reason of being a junior primary homonym of *lineatus* Bruguière, 1789, as published in the binomen *Bulimus lineatus*, as ruled in (1) above.

Acknowledgements

I am thankful to C. Audibert, R. Bank, J. Gerber, F. Giusti and I. Richling for their advice and critically checking the manuscript.

References

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Case 3569

Limax fasciatus Razoumowsky, 1789 (LIMACIDAE) and *Limax fasciatus* Nilsson, 1823 (currently *Arion fasciatus*, ARIONIDAE): proposed conservation of both specific names (Gastropoda, Stylommatophora)

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Abstract. The purpose of this application, under Articles 23.9.5 and 23.10 of the Code, is to conserve the specific name of *Arion* (*Carinarion*) *fasciatus* (Nilsson, 1823) (ARIONIDAE), originally published in the combination *Limax fasciatus* as a primary homonym of *Limax fasciatus* Razoumowsky, 1789 (LIMACIDAE). The two names have not been considered congeneric since the 19th century. We propose to conserve the name *Limax fasciatus* Nilsson, 1823, by ruling that the name is not invalid by reason of being a junior primary homonym.

Keywords. Nomenclature; taxonomy; Gastropoda; Pulmonata; LIMACOIDEA; LIMACIDAE; ARIONOIDEA; ARIONIDAE; *Limax*; *Arion*; *Carinarion*; *Limax fasciatus*; *Arion fasciatus*; slugs.

1. The name *Arion* (*Carinarion*) *fasciatus* (Nilsson, 1823) has been used world-wide for many decades to refer unambiguously to a well-known common and widely distributed species of land slug, which is also of importance in the applied sciences (e.g. Godan, 1983; Barker, 2002; South, 1992). The prevailing usage of this name is demonstrated in the 25 works cited in Falkner et al. (2002, p. 141, note 269). Additional citations demonstrating usage include Walden (1955), Lohmander (1959), Hudec (1960), Chichester & Getz (1969), Getz & Chichester (1971); Grossu (1970), Wiktor (1973, 1996), Riedel & Wiktor (1974), McCracken & Selander (1980), Reischütz (1986), Backeljau et al. (1997), Schmid (1997), Turgeon et al. (1998), Jordaens et al. (2002) and Geenen et al. (2006). In Geenen et al. (2006) the three species of the subgenus *Carinarion* are synonymised under *Arion fasciatus*. This emphasises the necessity to conserve Nilsson's name. There are also multiple other examples of usages, especially in the faunistic literature. A list of additional 50 references demonstrating the usage of the name *Arion fasciatus* is held by the Commission Secretariat.

2. *Arion* (*Carinarion*) *fasciatus* (Nilsson, 1823) was originally described as *Limax fasciatus* Nilsson, 1823 (p. 3). This was a junior primary homonym of *Limax fasciatus*

Razoumowsky, 1789 (p. 267), and should normally have been regarded as permanently invalid. With the aim of preserving the current usage of the combination *Arion fasciatus* (Nilsson), an action was taken in accordance with Article 23.9.2 of the Code by Falkner et al. (2002, p. 141, note 269) and *Limax fasciatus* Razoumowsky, 1789 was declared a nomen oblitum. We recently found that this action was taken in error and that the conditions of the relevant Articles were not met. The name *Limax fasciatus* Razoumowsky, 1789, has been used as valid at least twice after 1899. Taylor (1906, p. 266) used it in the combination *Limax maximus* var. *fasciata* Razoumowsky, 1789, to denote a variety of *Limax maximus* Linnaeus, 1758, and Alzona (1971, p. 149) used it in the combination *Limax albipes fasciatus* Razoumowsky, 1789, to denote a subspecies of *Limax albipes* Dumont & Mortillet, 1853 (in Dumont & Mortillet, 1852–1854). In such a case, Article 23.10 of the Code (Erroneous reversal of precedence) requires reference to the Commission.

3. Meanwhile the perception of *Limax fasciatus* Razoumowsky, 1789 has changed. A working-group of the Staatliches Museum für Naturkunde Stuttgart (Sektion Malakologie) has undertaken research in the type locality near Lausanne, in order to clarify the identity of that unjustly neglected nominal taxon. As a result of the historical studies of Grossenbacher (1990) the type locality could be more precisely defined and it was found that the species is sufficiently described to be recognised in the field. A large revision is in preparation and from preliminary results it seems very likely that this early name for an alpine *Limax* needs to be revalidated. Up to now no other available names which could potentially be applied to Razoumowsky's *Limax* species have been identified. We thus think it desirable to reinstate its priority over *Limax fasciatus* Nilsson, 1823, and then deal with the latter junior homonym by recourse to a different provision of the Code.

4. According to modern taxonomic views there is no conflict or possible confusion of *Limax fasciatus* Nilsson, 1823 with *Limax fasciatus* Razoumowsky, 1789. Shortly after its description *Limax fasciatus* Nilsson, 1823 was recognised as belonging to the genus *Arion* A. Férusac, 1819. In the 19th century it was consistently placed in this genus, either as a valid species or as a synonym, e.g. by C. Pfeiffer (1828, p. 11), Nordenskiöld & Nylander (1856, p. 3); Westerlund (1865, p. 27), Collinge (1892, p. 77). Thereafter the two species have never been included in the same genus. Introducing a replacement name for *Limax fasciatus* Nilsson, 1823, in general use as *Arion fasciatus* (Nilsson, 1823), would cause considerable confusion. Article 23.9.5 of the Code (names not considered congeneric after 1899) states that such a case should be referred to the Commission. The present application aims to conserve the prevailing usage in the interests of stability and universality of nomenclature.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to rule that reversal of precedence of *Limax fasciatus* Razoumowsky, 1789 and *Limax fasciatus* Nilsson, 1823 by Falkner et al. (2002, p. 141, note 269) was erroneous and the priority of *Limax fasciatus* Razoumowsky, 1789 is maintained;

(2) to use its plenary power to rule that the specific name *Limax fasciatus* Nilsson, 1823, is not invalid by reason of being a junior primary homonym of *Limax fasciatus* Razoumowsky, 1789;

(3) to place on the Official List of Specific Names in Zoology the following names:

(a) *fasciatus* Nilsson, 1823, as published in the binomen *Limax fasciatus*, with the endorsement that it is not invalid by reason of being a junior primary homonym of *Limax fasciatus* Razoumowsky, 1789;

(b) *fasciatus* Razoumowsky, 1789, as published in the binomen *Limax fasciatus*.

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Case 3568

Stirpulina Stoliczka, 1870 (Mollusca, Bivalvia, Anomalodesmata, CLAVAGELLIDAE): proposed conservation by suppression of *Tubolana* Bivona Bernardi, 1832

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Abstract. The purpose of this application, under Article 23.9.3 and Recommendation 23A of the Code, is to conserve the genus name *Stirpulina* Stoliczka, 1870 for a group of watering pot shells. The genus name *Stirpulina* is in widespread and current use. This name is threatened by the little-used senior subjective synonym *Tubolana* Bivona Bernardi, 1832. It is proposed that the name *Stirpulina* be conserved by the suppression of *Tubolana*.

Keywords. Nomenclature; taxonomy; Bivalvia; Anomalodesmata; CLAVAGELLOIDEA; CLAVAGELLIDAE; *Stirpulina*; *Tubolana*; *Stirpulina coronata*; *Tubolana digitata*; watering pot shells; Upper Cretaceous; Recent.

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1. Bivona Bernardi (1832, pp. 55, 56) established the genus name *Tubolana* for a single new fossil species *Tubolana digitata* Bivona Bernardi, 1832 (pp. 56, 57), the type species by monotypy. This name was also spelt as *Tubulana ditata* (p. 56) in the original publication. All subsequent publications have used the spelling *Tubolana digitata* (e.g. di Monterosato, 1877, p. 40; Smith, 1962, p. 170; Keen & Smith, 1969, p. N858; Stallwood, 1995, p. 88).

2. The species name *Tubolana digitata* Bivona Bernardi, 1832 has not been used as a valid name since it was first synonymised with the fossil species *Clavagella bacillaris* Deshayes, 1830 (pp. 239, 240) by di Monterosato, 1877 (p. 40). This synonymy has not been disputed (e.g. Smith, 1962; Keen & Smith, 1969; Stallwood, 1995).

3. Stoliczka (1870, pp. xv, 27, 28) established the generic name *Stirpulina* for two fossil species: *Clavagella coronata* Deshayes, 1824 (pp. 8, 9) and *Clavagella bacillaris* Deshayes, 1830. *Clavagella coronata* is the type species by original designation (Stoliczka, 1870, p. xv).

4. The genus name *Tubolana* Bivona Bernardi, 1832 is a senior subjective synonym of *Stirpulina* Stoliczka, 1870 as the type species of *Tubolana* (*T. digitata*) is a junior subjective synonym of a species included in *Stirpulina* (*Clavagella bacillaris*; see Stallwood, 1995, p. 88).

5. The genus *Stirpulina* is currently composed of fourteen fossil and one extant species known from the Late Cretaceous onwards (see Stallwood, 1995, p. 88). The single extant species is *Clavagella ramosa* Dunker, 1882 (p. 172), which was first transferred to the genus *Stirpulina* by Fujita (1929, p. 62). *Stirpulina ramosa* (Dunker, 1882) has been of considerable use in understanding the evolution of tube formation in bivalve molluscs (e.g. Savazzi, 1982, 2005; Morton, 2005, 2006b, 2007). The genus *Stirpulina* is currently assigned to the family CLAVAGELLIDAE d'Orbigny, 1845 (superfamily CLAVAGELLOIDEA d'Orbigny, 1845, Anomalodesmata Dall, 1889) (see Morton, 2005, p. 204; Bieler et al. in Bouchet & Rocroi, 2010, p. 132).

6. The genus *Stirpulina* has been in widespread and current use since it was first established by Stoliczka in 1870. In the past 50 years, at least 30 publications by 17 different authors using *Stirpulina* as a valid genus have been located (e.g. Hölzl, 1961, p. 65; Smith, 1962, p. 168, 1963, p. 15; Keen & Smith, 1969, p. N858; Buccheri, 1970, p. 241; B.J. Smith, 1976, p. 195; Maxwell, 1978, p. 29; Savazzi, 1982, p. 293; Morton, 1984, p. 464; Pojeta & Sohl, 1987, p. 5, 1988, p. 826; Jones & Nicol, 1989; p. 320; Darga, 1990, p. 20; Mayoral, 1990, p. 117; Stallwood, 1995, p. 84; Dulai, 1996, p. 71; Morton, 2002a, p. 546, 2002b, p. 13; 2003, p. 389, 2004a, p. 37; 2004b, p. 246, 2004c, p. 355; 2005, p. 202; 2006a, p. 187, 2006b, p. 233, 2006c, p. 103, 2007, p. 19, 2009, p. 252; Savazzi, 2005, p. 180; Morton & Grebneff, 2011, p. 125). This fulfils the conditions of Article 23.9.1.2 of the Code (Reversal of Precedence).

7. Since 1899, just five publications using the genus name *Tubolana* have been located. Two publications considered this name to be valid but taxonomically unplaced (Vokes, 1967, p. 341; 1980, p. 214). Two other publications considered this name to be valid and a possible senior synonym of *Stirpulina* but gave preference to the name *Stirpulina* (L.A. Smith, 1962, p. 170; Keen & L.A. Smith, 1969, p. N858). The final and most recent use of the name *Tubolana* was in a reprint of di Monterosato's collected works (Giannuzzi Savelli, 1989, p. 1407), where all instances of the name *Tubolana* (without discussion of the validity of the name) as used by di Monterosato were listed. The post-1899 use of *Tubolana* as a valid generic name in the first four publications means that the conditions of Article 23.9.1.1 of the Code (Reversal of Precedence) are not met and a ruling by the Commission is needed for formal suppression of the name.

8. The generic name *Stirpulina* Stoliczka, 1870 has been used as valid in at least 30 publications in the past 50 years. The generic name *Tubolana* Bivona Bernardi, 1832 has been used as valid only four times since 1899. Although the conditions of Article 23.9.1 for maintaining current usage are not fulfilled, the conservation of the name *Stirpulina* Stoliczka, 1870 would best serve nomenclatural stability.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to suppress the name *Tubolana* Bivona Bernardi, 1832 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the name *Stirpulina* Stoliczka, 1870 (gender: feminine), type species by original designation *Clavagella coronata* Deshayes, 1824;

(3) to place on the Official List of Specific Names in Zoology the name *coronata* Deshayes, 1824, as published in the binomen *Clavagella coronata* (specific name of the type species of *Stirpulina* Stoliczka, 1870);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Tubolana* Bivona Bernardi, 1832, as suppressed in (1) above.

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Case 3541

METINAE Simon, 1894 (Arachnida, Araneae, TETRAGNATHIDAE): proposed emendation of the current spelling to METAINAE to remove homonymy with METIDAE Boeck, 1872 (Crustacea, Copepoda)

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Abstract. The purpose of this application, under Articles 55.3.1 and 29 of the Code, is to remove homonymy between the family-group name METINAE Simon, 1894 currently used in Araneae (TETRAGNATHIDAE) and the crustacean family-group name METIDAE Boeck, 1872. It is proposed that the spelling of the spider name (based on the generic name *Meta* C.L. Koch, 1835) be emended to give METAINAE, while leaving the crustacean name (based on the generic name *Metis*) unaltered.

Keywords: Arachnida; Araneae; TETRAGNATHIDAE; Crustacea; Copepoda; METIDAE; *Meta*; *Metis*; *Meta menardi*; *Metis ignea*; crustaceans; spiders.

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1. The family group name METEAE was proposed by Simon for a group of orb weaving spiders that he defined morphologically as 'intermediate between *Tetragnatha* Latreille, 1804 and *Nephila* Leach, 1815' (Simon, 1894, p. 726). The type genus for this family group name was *Meta* C.L. Koch, 1835 (pl. 12), with the type species *Epeira menardi* Latreille, 1804. Simon (1894) did not mention the etymology of this genus. However, several of Simon's interpretations of names were later corrected by Thorell (1869) who considered *Meta* to be a Greek proper noun based on the name of the first wife of Aegeus, legendary King of Athens (Thorell, 1869, p. 35; Cameron in Ubick et al., 2005). Other uses of the family group name Meteae after Simon's (1894) work were: Petrunkevitch's *Systema Araneorum* published in 1928. This spider catalog ranked METEAE as the subfamily METINAE and included metine spiders within the former orb-weaver family ARGIOPIDAE (Petrunkevitch, 1928, p. 141). Roewer's (1942) catalog followed the usage of METINAE, but considered it a subfamily within ARANEIDAE. Levi (1980) was the first to diagnose METINAE, revise the North American species and discuss its phylogenetic relationships with other araneoids. Platnick (1989) noted that the spider family name METINAE is invalid because it was preoccupied in the Copepoda. However, the name METINAE has been used by several authors in discussions of the taxonomy and phylogeny of these spiders (e.g. Heimer

& Nentwig, 1982; Brignoli, 1983; Levi 1986; Coddington, 1990; Hormiga et al., 1995; Griswold et al., 1998; Kuntner & Álvarez-Padilla, 2006; Álvarez-Padilla, 2007; Álvarez-Padilla et al., 2009). We have recently explained this homonymy problem and diagnosed the subfamily using the name METAINAE Simon, 1894 to avoid the homonymy (Álvarez-Padilla et al., 2009).

2. The crustacean family METIDAE was first proposed by Boeck (1872, p. 59) to include a group of Copepoda whose type genus is *Metis* Philippi, 1843 (p. 59), with the type species *Metis ignea* Philippi (p. 61). Homonymy of the two family group names arose because even though the generic names have different spellings, the names of their type genera have the same stem (*Met-*). The crustacean name METIDAE Boeck, 1872 has priority over METINAE Simon, 1894 (Article 23.1 of the Code). Unfortunately Philippi did not give the etymology of *Metis* (Philippi, 1843, p. 59) or specify the language of this word, but the name is probably derived from the Greek noun mêtis, meaning counsel, wisdom, skill or prudence. Its usual genitive is *metios*, so the stem would be *meti-* and a family name based on it METIIDAE, although there is a less used genitive (in lyric compositions), *metidos*, in which the stem is *metid-* and a family name based on it METIDIDAE. However, the original spelling METIDAE Boeck, 1872 seems to be uncontested as the spelling in prevailing usage, even if METIIDAE or METIDIDAE is the grammatically correct spelling. Therefore we suggest that the current spelling METIDAE for the crustacean family be maintained under Article 29.5 (Maintenance of current spellings of family-group names).

3. Reversal of precedence under Article 23.9.2 cannot be applied to this senior homonym because the name METIDAE Boeck, 1872 has been used more than 25 times after 1899 within Crustacea (Sars, 1910; Farran, 1913; Wilson, 1932; Guaita, 1961; Vervoort, 1964; Coull, 1977; Por, 1984; Gerber, 1987; Dahms, 1989; Meyer & Bell, 1989; Fiers, 1992; Damkaer, 1996; Suárez-Morales et al., 2006; Wells, 2007 and references therein). Therefore, the case is referred to the Commission under Article 55.3.1 of the Code.

4. We propose to emend the spelling of the family-group name METINAE Simon, 1894 to METAINAE to remove its homonymy with METIDAE Boeck, 1872.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to rule that for the purposes of Article 29 of the Code the stem of the generic name *Meta* C.L. Koch, 1835 is *Meta-*;

(2) to place on the Official List of Generic Names in Zoology the following names:

  (a) *Meta* C.L. Koch, 1835 (gender: feminine), type species *Epeira menardi* Latreille, 1804 by original designation;

  (b) *Metis* Philippi, 1843 (gender: feminine), type species *Metis ignea* Philippi, 1843 by monotypy;

(3) to place on the Official List of Specific Names in Zoology the following names:

  (a) *menardi* Latreille, 1804, as published in the binomen *Epeira menardi* (specific name of the type species of *Meta* C.L. Koch, 1835);

  (b) *ignea* Philippi, 1843, as published in the binomen *Metis ignea* (specific name of the type species of *Metis* Philippi, 1843);

(4) to place on the Official List of Family-Group Names in Zoology the following names:
    (a) METAINAE Simon, 1894, type genus *Meta* C.L. Koch, 1835, spelling emended by the ruling in (1) above (Arachnida, Araneae);
    (b) METIDAE Boeck, 1872, type genus *Metis* Philippi, 1843 (Crustacea, Copepoda);

(5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name METINAE Simon, 1894 (Arachnida, Araneae), spelling emended to METAINAE, as ruled in (1) above.

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Case 3570

Curculio scirpi Fabricius, 1792 (currently *Notaris scirpi*; Insecta, Coleoptera, CURCULIONOIDEA, ERIRHINIDAE): proposed precedence over *Curculio rhamni* Herbst, 1784 and *C. scirpi* Rossi, 1790

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Abstract. The purpose of this application, under Articles 23.9.3, 81.2.1 and 81.2.3 of the Code, is to conserve the name *Curculio scirpi* Fabricius, 1792, a common Palaearctic weevil species currently belonging to the genus *Notaris* (CURCULIONOIDEA, ERIRHINIDAE) by giving it precedence over the little-used older name *C. rhamni* Herbst, 1784 whenever these names are considered to be synonyms, and by suppressing the little-used senior homonym *C. scirpi* Rossi, 1790.

Keywords. Nomenclature; taxonomy; Coleoptera; CURCULIONOIDEA; ERIRHINIDAE; *Curculio*; *Notaris*; *Notaris scirpi*; *Notaris rhamni*; *Curculio scirpi*; weevil; Palaearctic.

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1. Herbst (1784, p. 78) described a new species of ERIRHINIDAE (formerly CURCULIONIDAE) from Reppen (now Rzepin in western Poland) as *Curculio rhamni*. Subsequently (Herbst, 1795, p. 280) he redescribed this species accompanied by a drawing and specifying that it was already described previously. This taxon was first synonymised with *Erirhinus scirpi* (Fabricius, 1792) (formerly *Curculio*, presently *Notaris*) by Gyllenhal (1835, p. 284) without comment. Klima (1934, p. 37) cited *C. rhamni* Herbst, 1784 as a doubtful synonym along with *Notaris scirpi* and *C. rhamni* sensu Herbst, 1795 as a synonym of *Notaris bimaculatus* (Fabricius, 1787) (presently *Tournotaris* Alonso-Zarazaga & Lyal, 1999). Recently in their checklist of the weevils from the Kemerovo Province (southern Siberia) and the Coleoptera from Latvia respectively, Krivets & Legalov (2002, p. 820) and Telnov (2004, p. 105) quoted *Notaris rhamni* (Herbst, 1795) as a valid species, the latter placing *scirpi* (Fabricius, 1787 [sic] nec Rossi, 1790) in synonymy with *rhamni*. Telnov (pers. comm.) stated that 'reporting *Notaris rhamni* (Herbst, 1795) in this catalogue was a mistake and does not have any nomenclatural background'.

2. Since the type material of *C. rhamni* was not traced, recently Caldara & Winkelmann (2010) designated a neotype for this taxon following the original description and the drawing reported in Herbst's (1795) redescription and in accordance with Article 75 of the Code. They proposed the synonymy of this species with *Notaris scirpi* (Fabricius, 1792) (formerly *Curculio*).

3. Rossi (1790, p. 118) described *Curculio scirpi* based on specimens collected in "Etruria" (presently an area of central Italy including Tuscany and part of Umbria and Latium). Since then this taxon has never been listed in papers or catalogues except for Telnov (2004). No type specimens of *Curculio scirpi* Rossi are available at the Museum für Naturkunde der Humboldt-Universität of Berlin (ex coll. J.C.L. Hellwig), where part of Rossi's collection is housed. However, Rossi's description agrees well with the modern concept of *N. scirpi* (Fabricius, 1792) (Hoffmann, 1958; Dieckmann, 1986; Smreczyński, 1972). Therefore, following all the qualifying conditions of Article 75.3 of the Code, with the express purpose of clarifying the taxonomic status of this taxon, clearly differentiated from other closely related species by characters reported by Hoffmann (1958), Smreczyński (1972) and Dieckmann (1986), we decided to designate a specimen bearing these characters as the neotype of *C. scirpi* Rossi. This is a male specimen labelled as follows: 'palude di Fucecchio, 19-11-967, L. Failla [handwritten] / Ex-coll. Failla [printed] / NEOTYPE, Curculio scirpi Rossi, 1790, des. Caldara & Winkelmann 2011 [red card, printed] / Notaris scirpi (Fabricius), det. Caldara & Winkelmann 2011 [printed]'. The specimen is 5.5 mm long (rostrum excluded), well preserved and set on a white rectangular card. It is deposited at the Museum of Natural History of Florence. The neotype locality of *C. scirpi* Rossi (originally 'Etruria') is Palude di Fucecchio (Pistoia, Tuscany, Italy). The following synonymy is here proposed: *Notaris scirpi* (Fabricius, 1792) = *Curculio scirpi* Rossi, 1790 n. syn.

4. *Notaris scirpi* (Fabricius, 1792) (formerly *Curculio*) is a common weevil species which has been cited under this name and this author repeatedly over the past 50 years (Abbazzi & Maggini, 2009; Abbazzi & Osella, 1992; Abbazzi et al., 1994; Alonso-Zarazaga, 2002; Alonso-Zarazaga et al., 2006; Angelini, 1987; 1998; Angelini & Montemurro, 1986; Bercio & Folwaczny, 1979; Caldara & O'Brien, 1995; Casalini & Colonnelli, 2001; Colonnelli, 2003; Dieckmann, 1986; Endrödi, 1970; Hansen M., 1996; Hansen V., 1964; Lohse, 1983; Morris, 2002; Pelletier, 2005, Pešić, 2004; Silfverberg, 1979; Smreczyński, 1972; Tempère & Péricart, 1989; Thompson, 2006; Wanat & Mocrzycki, 2005). Because of Krivets & Legalov's citation of *Notaris rhamni* (Herbst) and Telnov's (2004) citation of *Notaris rhamni* (Herbst) and *N. scirpi* (Rossi), the junior name *scirpi* Fabricius cannot be maintained under the Code, despite being in prevailing usage according to Article 23.9.1.2 of the Code (1999), as the conditions of Article 23.9.1.1 are not met. We also believe that the use of the senior primary homonym *scirpi* Rossi, 1790 would be undesirable and would cause nomenclatural confusion.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power:

   (a) to give the specific name *scirpi* Fabricius, 1792, as published in the binomen *Curculio scirpi*, precedence over the name *rhamni* Herbst, 1784, as published in the binomen *Curculio rhamni*, whenever the two names are considered to be synonyms;

(b) to suppress the specific name *scirpi* Rossi, 1790, as published in the binomen *Curculio scirpi*, for the purposes of both the Principle of Priority and the Principle of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the following names:

(a) *scirpi* Fabricius, 1792, as published in the binomen *Curculio scirpi*, with the endorsement that it is to be given precedence over the name *rhamni* Herbst, 1784, as published in the binomen *Curculio rhamni*, whenever the two names are considered to be synonyms;

(b) *rhamni* Herbst, 1784, as published in the binomen *Curculio rhamni*, with the endorsement that it is not to be given priority over the name *scirpi* Fabricius, 1792, as published in the binomen *Curculio scirpi*, whenever the two names are considered to be synonyms;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *scirpi* Rossi, 1790, as published in the binomen *Curculio scirpi* and as suppressed in (1)(b) above.

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Case 3571

Crotalinus catenatus Rafinesque, 1818 (currently *Sistrurus catenatus*) and *Crotalus tergeminus* Say in James, 1822 (currently *Sistrurus tergeminus*; Reptilia, Serpentes): proposed conservation of usage by designation of neotypes for both species

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Abstract. The purpose of this application, under Articles 78.1, 78.2.3 and 81 of the Code, is to conserve the long and continuing usage of the specific name *Crotalinus catenatus* Rafinesque, 1818 (currently *Sistrurus catenatus*) for a species of pygmy rattlesnake by designation of a neotype. In addition, in order to will conserve the nearly equally long and continuous usage of the name *Crotalus tergeminus* Say in James, 1822 (currently *Sistrurus tergeminus* or *Sistrurus catenatus tergeminus*) for another pygmy rattlesnake, the Commission is asked to designate a neotype for this nominal species also. Newly found evidence indicates that the name *Crotalinus catenatus* was based on a specimen of *C. tergeminus*, and to conserve the names of both nominal taxa designation of neotypes for each is required.

Keywords. Nomenclature; taxonomy; Reptilia; Serpentes; *Sistrurus*; *Sistrurus catenatus*; *Sistrurus tergeminus*; rattlesnakes; North America.

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1. Rafinesque (1818, p. 41) briefly described a new species of rattlesnake as *Crotalinus catenatus* from 'the prairies of the Upper Missouri' in the Louisiana Purchase of the United States. The name was based on a single specimen collected by John Bradbury on the Wilson P. Hunt Expedition to the Pacific Coast. This name has been used continuously since 1895 in the combination *Sistrurus catenatus* for a species of pygmy rattlesnake. In addition, the name has been used from 1936 to date for the subspecies *Sistrurus catenatus catenatus*, which ranges east of the Mississippi River (Kubatko et al., 2011, p. 3).

2. Say in James (1822, p. 499) subsequently described *Crotalus tergeminus* based on two pygmy rattlesnakes collected from an indefinite locality during the Long

Expedition to the Rocky Mountains in the western United States. This name has been continuously used in the combination *Sistrurus tergeminus* or *S. catenatus tergeminus* since Garman ('1883', 1884, pp. 118, 176) for a taxon found west of the Mississippi River (Kubatko et al., p. 3). The James account is often cited as appearing in 1823 but Woodman (2010, p. 28) has demonstrated that it was offered for sale in late December, 1822.

3. Recently, Holycross et al. (2008, p. 422) presented evidence from Bradbury's (1817, p. 70) account of his travels that the holotype of *Crotalinus catenatus* was collected on April 25, 1811, not on the prairies of the Upper Missouri but on the floodplain of the Missouri River between the mouth of the Platte River and modern-day Nebraska City, Nebraska, U.S.A. In fact there was a confusion of locality data for this snake and another (*Crotalinus viridis* Rafinesque, 1811) collected by Bradbury (1817, p. 147) and described from a single specimen that was stated by Rafinesque (1811, p. 41) to have been from the 'Upper Missouri.' Holycross et al. (2008, p. 422) provided evidence that the second snake was actually collected in what is modern-day North Dakota. These authors further demonstrated that the type locality of what is called *Crotalinus catenatus* is within the range of *Sistrurus catenatus tergeminus* and not that of the form usually called *S. c. catenatus*. Under the Principle of Priority (Article 23 of the Code), this makes *Crotalinus catenatus* a name that cannot be applied to the eastern taxon because it is a senior synonym of *Crotalus tergeminus*. While there can be no question regarding the identity of the holotype and the type locality of *Crotalinus catenatus*, that specimen is no longer extant (Holycross, 2008, p. 422).

4. The situation is complicated by the lack of agreement concerning the provenance of the syntypes of *Crotalus tergeminus*. It has been variously cited as indefinite (Minton, 1983, p. 1; Gloyd, 1955, p. 92); between the Mississippi River and the Rocky Mountains (Klauber, 1956, p. 50; McDiarmid et al. 1999, p. 325; Campbell and Lamar, 2004, p. 609); between Plateville, Weld County, and just south of Brighton, Adams County, northeastern Colorado [northeast of present day Denver] (Dundee, '1996', 1997, p. 81); or possibly along the Boyer River, in Harrison County, Iowa (Dundee, '1996', 1997, p. 8). To further complicate matters, there have been two arbitrary restrictions of the type locality, by Smith and Taylor (1950, p. 358) to Winfield, Cowley County, Kansas and by Schmidt (1953, p. 226) to the headwaters of the Arkansas River. The syntypes of *Crotalus tergeminus* no longer exist. They appear to have been part of the Charles Willson Peale Museum (the Philadelphia Museum) collection, which was sold to P.T. Barnum in 1849. They were almost certainly incinerated in the 1851 fire that destroyed Barnum's Museum (Stroud, 1992, p. 287).

5. If the name *catenatus* were to be applied to the western population the first available name for the eastern taxon is *Crotalus messasaugus* Kirtland, 1838, no type locality stated but certainly from the state of Ohio where Kirtland resided. Adler (1963) suggested that a National Museum of Natural History, U.S.A. specimen (USNM 526) collected from Mahoning County, Ohio by Kirtland might be the holotype of this taxon. The name *messasaugus* has not been used as a valid name in any publication post-1899 and its use would upset stability by replacing *Sisturus catenatus*.

6. Kubatko et al. (2011, p. 13), apparently unfamiliar with the paper by Holycross et al. (2008), suggested on the basis of a phylogenetic analysis that *Sistrurus catenatus* and *Sistrurus tergeminus* be recognized as separate species.

7. Inasmuch as the names *Sistrurus catenatus* or *S. c. catenatus* and *Sistrurus tergeminus* or *S. c. tergeminus* have appeared in approximately 1400 works by at least 250 authors since 1895 (Zoological Record 1895–2007), universality and stability seem best served through action of the Commission to use its plenary power (Article 81 of the Code) to preserve prevailing usage by designating neotypes of known provenance for the two taxa in question. The standard procedures of the Code (Article 75) for neotype designation cannot be applied in this case because of the constraint that any specimen selected to bear the name *Crotalinus catenatus* should come from or near the original type locality (Article 75.3.6), which in that event would lie within the geographic range of the taxon currently recognized as *Sistrurus catenatus tergeminus*. In the case of *Crotalus tergeminus* it is not possible to ascertain which of the several options might be the type locality. Therefore, it seems logical to select a neotype from a definite locality near the route of the Long Expedition's return to the east from the Rocky Mountains down the course of the Arkansas River where *Sistrurus catenatus tergeminus* is definitely known to occur. The latter action could be accomplished in a separate publication as it does not require the action of the Commission. However, under Article 78.2.3 of the Code, the Commission is empowered to apply the provisions of the Code and issue an Opinion on any question of zoological nomenclature, and we believe it would be most parsimonious for the Commission to select neotypes for the two involved taxa at the same time.

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to designate specimen USNM 526 at the National Museum of Natural History, U.S.A. from Poland, Mahoning County, Ohio, U.S.A. as the neotype of *Crotalinus catenatus* Rafinesque, 1816;

(2) to use its specific powers to designate specimen USNM 86472 at the National Museum of Natural History, U.S.A., from Winfield, Cowley, Kansas, U.S.A. as the neotype of *Crotalus tergeminus* Say in James, 1822;

(3) to place on the Official List of Specific Names in Zoology the name *catenatus* as published in the binomen *Crotalinus catenatus* Rafinesque, 1811, and as defined by the neotype designated in (1)(a) above;

(4) to place on the Official List of Specific Names in Zoology the name *tergeminus* as published in the binomen *Crotalus tergeminus* Say in James, 1822 and as defined by the neotype designated in (1)(b) above.

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Case 3563

Pachylemur Lamberton, 1948 (Primates, LEMURIDAE): proposed conservation of the generic name

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Abstract. The purpose of this application, under Articles 23.9.3, 81.1 and 81.2.3 of the Code, is to conserve the name *Pachylemur* Lamberton, 1948 (Primates, LEMURIDAE), a genus of subfossil Malagasy lemurs, by suppressing the senior subjective synonym *Palaeochirogalus* Grandidier, 1899 and by designating a type species for the genus *Pachylemur* Lamberton. *Palaeochirogalus* Grandidier has never seen any substantial usage whereas *Pachylemur* Lamberton, 1948 is in universal use; however, *Pachylemur* Lamberton, 1948 is unavailable because no type species was designated in the original publication. Filhol (1874) previously used the name *Pachylemur* for a 'groupe' of Paleogene primates; we conclude that this name, under either Filhol's or Palmer's (1904) authorship and, in either case, ambiguous as regards availability should be formally suppressed at the genus-group level to prevent confusion.

Keywords. Nomenclature; taxonomy; LEMURIDAE; *Palaeochirogalus*; *Pachylemur*; *Pachylemur insignis*; lemur; Madagascar.

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1. Filhol (1874, p. 18) introduced the name *Pachylemur* for a group of ancient primate-like mammals: 'Ce groupe, je proposerai de le désigner sous le nom de *Pachylemur*, et j'y placerai le *Palæolemur Bettillei*, l'*Adapis*, l'*Aphelotherium*, l'animal dont je viens de donner la description et les divers Lémuriens signalés jusqu'ici en Amérique'. He called *Pachylemur* a 'groupe' (group) and 'type zoologique' (zoological type) and explicitly included genera ('genres') within the 'groupe' (also Filhol, 1874, p. 18; outside the passage quoted above). Thus he apparently did not intend *Pachylemur* as a generic name; the possibility remains, however, that it could be construed as a generic name proposed for a series of taxa at subgeneric level. If *Pachylemur* Filhol, 1874 is construed as a family-group name, it is unavailable in the absence of an available type genus and because it is not a noun in the nominative plural (Article 11.7.1.1 of the Code).

2. Miall (1875, p. 267), in a *Geological Record* summary of Filhol's paper, wrote that Filhol had ' [p]ropose[d] a new group, *Pachylemuridæ*'. Under Article 11.7.1.1 of the Code, the name PACHYLEMURIDAE Miall, 1875 is apparently unavailable because it was not based on an available generic name and the type genus was not 'a name then used as valid in the new family-group taxon'. However, although Miall (1875) clearly considered it to have been proposed for a taxon in the family-group, if *Pachylemur* Filhol, 1874 were to be regarded as an available generic name, then under Article 11.7.1.1 of the Code, the name PACHYLEMURIDAE Miall, 1875 may also be available. Although this family name is not in current use under any authorship, its ambiguous status may at some time become destabilizing.

3. Gervais (1876, p. 36) transferred the species *Adapis magnus* Filhol, 1874 (p. 18) to a new genus. He considered using the name *Pachylemur* Filhol for this genus, but rejected it and proposed the new name *Leptadapis* instead. Under Article 11.5, *Pachylemur* Gervais, 1876 is unavailable because it was not used as a valid name.

4. Palmer (1904, p. 494), in his *Index generum mammalium*, listed '*Pachylemur* Gervais, 1876', and wrote that Filhol (1874) had used *Pachylemur* as a family. On p. 890, he listed the type of *Pachylemur* as *Adapis magnus* Filhol, but provided a cross-reference to *Leptadapis*. As Palmer (1904, p. 10) indicated, his work lists both synonyms and valid names without distinguishing them, so the presence of *Pachylemur* in his index does not constitute evidence that he used the name as valid. Palmer (1904, p. 785) wrote that he had included cross-references with at least some synonyms listed in Part III of his work; thus, the cross-reference to *Leptadapis* on p. 890 (in Part III) further suggests that he did not use *Pachylemur* as valid. If not, *Pachylemur* Palmer, 1904 is unavailable under Article 11.5 of the Code; however, the evidence is ambiguous, and a ruling by the Commission on its unavailability is desired. Palmer (1904, pp. 760, 890) also listed the family-group name PACHYLEMURIDAE, but if its type genus *Pachylemur* was not used as valid, this family name is unavailable under Article 11.7.1.1 of the Code.

5. Some other authors, mainly in the 19th and early 20th centuries (e.g. Flower, 1876 and various reprints of that paper; Claus, 1883), have mentioned *Pachylemur* Filhol or one of its derivatives, but we know of none that could be construed to have made the name available.

6. Grandidier (1899, p. 345) named a new genus and species of subfossil lemur as '*Palæochirogalus Jullyi*' (here corrected to *Palaeochirogalus jullyi* following Articles 5.1 and 32.5.2.5 of the Code). Some subsequent authors used the genus name as valid (e.g. Lorenz von Liburnau, 1901), and Smith (1903, pp. 324, 336, 508) recombined it as *Lemur jullyi*. Grandidier (1905, p. 78) then synonymised his *Palaeochirogalus jullyi* with *Lemur insignis* Filhol, 1895. As far as we are aware, *Palaeochirogalus* has not been used as a valid name in the taxonomic literature since 1905. In the meantime, Standing (1904, p. 306) had named a new species, *Lemur jullyi*, without mentioning Grandidier's species of the same name.

7. Lamberton (1948, p. 7) proposed *Pachylemur* as a new subgeneric name for the extinct species *Lemur insignis*, *L. majori* Standing, 1908 and *L. jullyi*, without mentioning either *Pachylemur* Filhol or *Palaeochirogalus*. He did not specify whether his '*Lemur jullyi*' was based on *Palaeochirogalus jullyi* Grandidier or *Lemur jullyi* Standing. Lamberton did not designate a type species, and the name is therefore

unavailable under Article 13.3 of the Code; nevertheless, many subsequent authors have used it (see below). Although it was originally proposed as a subgenus and recognized as such until the 1970s, most authors have recognized *Pachylemur* Lamberton as a valid genus since Tardieu & Jouffroy (1979). Tattersall (1982, pp. 240–241) discussed the nomenclature of the two species of *Pachylemur*: a smaller species from southern lowland Madagascar, *Lemur insignis* Filhol, 1895, and a larger species from the Central Highlands, known as *Lemur jullyi* Standing, 1904 (by then including *Lemur majori* Standing, 1908). He argued that *Palaeochirogalus jullyi* Grandidier (which had previously been seen as a synonym of *L. insignis*) was in fact probably conspecific with *Lemur jullyi* Standing, which it also preoccupies. Therefore, he attributed *Lemur jullyi* to Grandidier (1899) instead. Most workers since then have also recognized two species, *P. insignis* (Filhol, 1895) and *P. jullyi* (Grandidier, 1899), although some have expressed doubts that the two are specifically distinct (reviewed by Godfrey & Jungers, 2002; Godfrey et al., 2010).

8. The name *Pachylemur* Lamberton, 1948, is now in universal usage in the scientific literature about lemurs for *Lemur insignis* Filhol, 1895 and related species (e.g. Godfrey et al., 1990; Jungers et al., 1991; Simons et al., 1995; Jungers et al., 1995; Godfrey et al., 1995; Shoshani et al., 1996; Godfrey & Jungers, 2002; Burney et al., 2004; Perez et al., 2005; Shapiro et al., 2005; Godfrey & Irwin, 2007; Burney et al., 2008; Orlando et al., 2008; Mittermeier et al., 2008; Gommery et al., 2009; Polk et al., 2009; Turvey, 2009; Godfrey et al., 2010; Virah-Sawmy et al., 2010; Crowley et al., 2011). Unlike some other extinct and extant lemur genera, *Pachylemur* lacks a well-established common name. If the name were to be replaced because it is predated by *Palaeochirogalus*, or preoccupied by one of the older uses of *Pachylemur*, or simply unavailable, it would cause considerable confusion and instability. The name *Palaeochirogalus* would be an especially unfortunate replacement for *Pachylemur*, since it is based on the generic name of the dwarf lemurs, *Cheirogaleus* Geoffroy, 1812; this name was frequently spelled *Chirogalus* in the 19th century and Grandidier (1899) himself used the French vernacular form 'Chirogales'. *Pachylemur* is no longer considered to be closely related to the dwarf lemurs, which are now placed in a different family. The two most pressing threats to prevailing usage are the subjective senior synonym *Palaeochirogalus* Grandidier, 1899 and the unavailability of *Pachylemur* Lamberton, 1948. Since *Pachylemur* of Filhol, 1874 could perhaps be construed as having been proposed at genus-group level, it should be suppressed. *Pachylemur* of Gervais and family-group names based on it are clearly not available, so we do not request action from the Commission concerning these names. *Pachylemur* Palmer may be interpreted as only questionably unavailable; hence its suppression is requested. By suppressing both *Pachylemur* Filhol, 1874 and *Pachylemur* Palmer, 1904 at the genus level, the family-level names PACHYLEMURIDAE Miall, 1875 and PACHYLEMURIDAE Palmer, 1904, even if either is regarded as available, will become invalid under Article 39 of the Code. We propose that prevailing usage of the generic name be maintained by retroactively making the name *Pachylemur* Lamberton, 1948 available, and suppressing *Palaeochirogalus* Gandidier. No type species of *Pachylemur* Lamberton, 1948 has apparently ever been designated; we request that the Commission designate *Lemur insignis* Filhol, 1895 as the type species, as it was the first species of the genus to be described and the only one to be recognized as valid by all authors (e.g. Tattersall, 1973).

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power:
  (a) to suppress the following generic names for the purposes of both the Principle of Priority and Principle of Homonymy;
    (i) *Pachylemur* Filhol, 1874;
    (ii) *Pachylemur* Palmer, 1904;
  (b) to suppress the generic name *Palaeochirogalus* Grandidier, 1899 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
  (c) to rule that the name *Pachylemur* Lamberton, 1948 is available from its original publication;
  (d) to set aside all previous type species fixations for *Pachylemur* Lamberton, 1948 and designate *Lemur insignis* Filhol, 1895 as the type species;
(2) to place on the Official List of Generic Names in Zoology the name *Pachylemur* Lamberton, 1948, type species *Lemur insignis* Filhol, 1895, as ruled in (1)(c) and (1)(d) above;
(3) to place on the Official List of Specific Names in Zoology the name *insignis* Filhol, 1895, as published in the binomen *Lemur insignis*, specific name of the type species of *Pachylemur* Lamberton, 1948, as ruled in (1)(d) above.
(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
  (a) *Pachylemur* Filhol, 1874, as suppressed in (1)(a)(i) above;
  (b) *Pachylemur* Palmer, 1904, as suppressed in (1)(a)(ii) above;
  (c) *Palaeochirogalus* Grandidier, 1899, as suppressed in (1)(b) above.

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Acknowledgement of receipt of this application was published in BZN **68**: 94.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Comment on CHILODONTIDAE Macalister, 1876 (Ciliophora), CHILODONTINAE Eigenmann, 1910 (Pisces, Characiformes) and CHILODONTINAE Wenz, 1938 (Mollusca, Gastropoda): proposed resolution of homonymy between family-group names

(Case 3555; see BZN **68**: 175–179)

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The central issue is whether the emendation of the fish family-level name is justified. It becomes a balancing act between two principles of zoological nomenclature: original intent vs. stability. In the case of the fish family CHILODIDAE Eigenmann, 1910 [original spelling], there is no indication that the family name was malformed in the original description. The subsequent arguments cited in Case 3555 are at best adventurous and could just as well be considered an unjustified emendation.

For the fish type-genus *Chilodus* Müller & Troschel, 1844, there is no perceptible reference to teeth. Generally in nomenclature, much deference is given to the original spelling, even if it might be at slight variance to traditional linguistics. An example is the alternate spelling of silva and sylva for the Latin 'forest'; the letter y is unknown in the classical Latin alphabet, but spellings with y are maintained (e.g. *Scissurella transylvanica* Reuss, 1860). Or consider the case of *Scissurella evaensis* Bandel, 1998 with locative suffix *–ensis*, although the species was explicitly named for Mrs Eva Vinx. Geiger (2003) as first reviser explicitly retained the original spelling as it was carried out consistently. The argument that the diphtong *–ou* is equivalent to *–u* is one interpretation of the Code (Article 29.3.2). An alternate interpretation is the significant single letter variance (Article 58 Example). Whether *–odus* or *–us* is the correct suffix is a further issue, as *chil-* as well as *chilod-* are equally good prefixes. The Code does not require the names to be formal, grammatically correct derivations, they do not need to convey meaning in any specific language (e.g. fish genus *Abudefduf*, snail genus *Ittibittium*), they only need to sound Latin. *Chilodus* with root *Chilod-* meets those criteria. While the *–u-*/*-ou-* equivalence may be supported by additional data in other type-genera of fish families, it is not sufficient to extend this observation to all such generic names ending in *–odus*. Nomenclature is based on the examination of individual cases, not the overextension of select observations.

In summary, the simpler construct in agreement with the original spelling with the fewest unsupported, ad-hoc assumptions should be chosen as basis for the formation of names. The linguistic argument for the emendation of the fish family name has to be dismissed.

If the fish name is accepted as outlined in Case 3555, it sets a dangerous precedent for more nomenclatural alterations at the whim of subsequent authors. If the emended fish spelling should be maintained by the Commission, then it should be made clear in the accompanying Opinion that the emendation is unjustified, and that it is retained solely in the interest of stability. One could even debate the argument of stability, as one name – Mollusca or fish – has to be changed, but there is only a 12 year difference between the certainly properly formed molluscan name by Wenz (1938) and the emendation of the fish family in 1950. One may argue that the already emended name should be further modified, whereas the certainly properly formed one is to be retained in its original spelling. If it is accepted that the already emended fish name should be modified, it would be most appropriate to revert to the original spelling of Eigenmann, serving at once the purpose of removing homonymy and respecting original intent.

In conclusion, I advocate the reversion of the fish family name to the original CHILODIDAE, retaining the molluscan CHILODONTIDAE unchanged, and placing the unused protistan CHILODONTIDAE on the Official Index.

Additional references

Geiger, D.L. 2003. Phylogenetic assessment of characters proposed for the generic classification of Recent Scissurellidae (Gastropoda: Vetigastropoda) with description of one new genus and six new species from Easter Island and Australia. *Molluscan Research*, **23**: 21–83.

Comment on *Pleurotoma scabriuscula* Brugnone, 1862 (currently *Mangelia scabriuscula*; Mollusca, Gastropoda, CONOIDEA): proposed conservation

(Case 3558; see BZN **68**: 180–183)

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We strongly support the application of Scarponi et al. and we fully agree with their well presented considerations. We consider it to be of primary interest to maintain the stability of nomenclature.

Comments on *Cornu* Born, 1778 (Mollusca, Gastropoda, Pulmonata, HELICIDAE): request for a ruling on the availability of the generic name

Case 3518; (see BZN **68**: 97–104)

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I agree with Cowie's interpretation of Article 1.3.2 of the Code, and his application of this Article to the name *Cornu* Born, 1778. Consequently, I support fully his proposals. The endorsement by the ICZN of this genus-group name as being valid would be most conducive to the stability of the genus name of this very common land snail, as *Cornu* is the most senior name of those potentially involved.

A few details may be added to the application:

A live scalarid specimen of *Cornu aspersum* resembling the specimen described and figured by Born (1778) was figured by Bailey (2006, p. 12). Schileyko (2006, p. 1817, fig. 2330B) illustrates a syntype of *Cornu copiae* Born.

Additional references:

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Why it is *Cryptomphalus*, not *Cornu*

The land snail described as *Helix aspersa* Müller, 1774 (included in the Official List of Specific Names in Zoology by Opinion 336, Opinions and Declarations, **10**: 77–108, March 1955) is native to a small area in the central Mediterranean, but has long been introduced throughout most of western and central Europe, and more recently into virtually all temperate areas (Barker, 1999; Madec *et al.*, 2003). It is usually abundant, and is indeed an economically relevant species, both as food and as an agricultural pest. That this species is currently referred to in the zoological literature by no less than four generic assignments (letting aside misspellings) is surely problematic. Some of the reasons for this situation are taxonomic, but nomenclature is also a key issue. Recently, Cowie (BZN **68**: 97–104) has proposed that the wording of Article 1.3.2 be interpreted to confirm the availability of *Cornu* Born, 1778. Herewith I show that there are no grounds or need for any such ruling.

The distinctiveness of *Helix aspersa* relative to *Helix pomatia* Linnaeus, 1758 (type of *Helix* Linnaeus, 1758) was clearly stated by Charpentier (1837) when erecting *Cryptomphalus*, and thoroughly documented by Moquin-Tandon (1855), who used it as subgenus. This combination *Helix (Cryptomphalus) aspersa* has been used by many subsequent authors (Bofill & Haas, 1919a, 1919b, 1920; Bofill et al., 1920; Germain, 1930; Degner, 1930; Webb, 1943; Pilsbry, 1940; Renoux & Quatrefarges, 1951; Sparks, 1952; Colom, 1957; Zilch, 1960; Giusti, 1969; Bizot, 1971; Bequaert & Miller, 1973; Damjanov & Likharev, 1975; Backhuys, 1975; Manga-González & Cordero del Campillo, 1979; Hartwig et al., 1980; Hueto et al., 1982; Manga-González, 1983; Altimira Aleu & Altaba, 1985; Mas-Coma & Montoliu, 1987; Morrondo & Manga, 1989; Ferreri, 1994; Manga & Morrondo-Pelayo, 1994; Gracenea & González-Moreno, 2002). Recognizing conspicuous differences with the various species included in *Helix* s.s., genus rank for *Cryptomphalus* has also been widely used, either as *Cryptomphalus aspersus* (Haas, 1918, 1924a,b, 1929; Aguilar-Amat, 1929, 1933; Colom, 1954; Español i Cabeza, 1969; Jaeckel, 1969; Mercadal et al., 1970; Gasull, 1972; Parisi & Gandolfi, 1974; Gasull & Alcover, 1982; Falkner, 1990, 1993; Frank, 1995; Cossignani & Cossignani, 1995; Turner et al., 1998; Gallo, 1998; Baminger & Haase, 1999; Kerney et al., 1999; Robinson, 1999, 2001; Badii &

Flores, 2001; Bojat et al., 2001; Scarabino, 2003; Yildrim et al., 2004; Kiss et al., 2004; Campos & Calvo, 2006; Schileyko, 2006; Sverlova, 2006; Hubenov, 2007; Egorov, 2008; Sysoev & Shileyko, 2009), without gender agreement (*Cryptomphalus aspersa*: Goeden, 1974; Paniagua & Vázquez, 1976; Flores et al., 1986a, b, 1988, 1992; Faus, 1988; Dedov, 1998; Tribó et al., 1999; Brieva et al., 2008; Leonov, 2009), or with various misspellings (such as *Criptomphalus aspersus*: Ortiz de Zárate López, 1991). The above references are by no means the outcome of an exhaustive search; but they suffice to show that the majority of authors from a wide variety of specialties and countries have placed *H. aspersa* within *Cryptomphalus*. The discovery of a single synapomorphy in the internal structure of the male genitalia shared by *H. aspersa* with *H. aperta* Born, 1778 (type of *Cantareus* Risso, 1826) enabled Giusti et al. (1996) to synonymize *Cryptomphalus* as junior synonym, thus proposing the combination *Cantareus aspersus*. This has been followed by some authors (Neubert, 1998; Barker, 1999; Koene & Schulenburg, 2005; Manganelli et al., 2005; Wade et al., 2006, 2007; Ansart et al., 2007; Groenenberg et al., in press). However, lumping *H. aspersa* and *H. aperta* within *Cantareus* on the basis of a single shared trait ignores the conspicuous differences in general morphology, external appearance and ecology between these two species (already shown by Moquin-Tandon, 1855), and is at odds with the tendency to recognize small genera within HELICOIDEA by those same authors. At any rate, using *Cantareus aspersus* is a taxonomic decision that may not be sound but is in agreement with the Code.

As shown by molecular studies (Manganelli et al., 2005; Groenenberg et al., in press), *H. aspersa* and *H. aperta* are indeed closely related taxa. The closest genus to this clade is *Eobania* Hesse, 1913, while *Helix* proper is more distantly related. This is relevant in biogeographic terms. The group formed by *Eobania*, *Cryptomphalus* and *Cantareus* is native to southernmost Italy and Sicily. Remarkably, this area exported several land snail species throughout the Mediterranean already in Ancient times (Altaba, 2000). An implication for nomenclature is that the all-too-usual, surely Code-compliant, attractively simple option of leaving *Helix aspersa* within *Helix* (while accepting the validity of the very distinctive *Eobania*, which nobody appears to question) just doesn't agree with a natural taxonomy.

In the curiosities vogue of 18th century natural history cabinets, Born (1778) gave notorious relevance to an open-coiled terrestrial shell – it is the only figured specimen in a final color plate where it is shown in two views; (this plate is actually referred to in the text, contrary to the statement by Cowie (BZN **68**: 97–104)). Obviously it was considered a nature's wonder. Indeed, in the preface he warns the reader that he has strictly followed the Linnaean system ('Eas Conchyliorum species, quas Linnaei systema haud completitur, methodo, summo huic vir usitata, descripsi. . .'), refraining from any alternative, in order to highlight the rarest of nature's objects ('in iis rarum et singulare admirandum est'). Thus he named the open-coiled shell *Cornu copiae* – an obvious word game referring to the shape of such unique a specimen. In its description, Born (p. 372) states that maybe this is different from Müller's (1774) species 313 (more explicit in the German text: 'Dadurch unterscheidet sie sich als eine besondere Art von einer, welcher Seba und Argenville und vielleicht auch von der, welcher Otto Müller gedenket.'). The latter is *Helix scalaris* (Müller, 1774, pp. 113–114), described as a shell having the color and texture of *H. pomatia*, yet truly splendidly distinct from other of its kind by its shape ('Testa colore & substantia *H.*

Pomatiae, figura vero a congeneribus splendide distincta. . .'). Müller refers to a figure in Argenville (1757, pl. 9, fig. 8 and p. 82), stating that his 'species' is not the same as that shown there, because the soft parts depicted in that figure are rather those of an aquatic snail. Indeed, Argenville's figure (reproduced also in the posthumous third edition of his work in 1780, Pl. LXXVI, fig. L) shows an (almost) open-coiled *H. aspersa* from whose aperture an abnormal head-foot pops out – likely as a pictorial indication of the teratological nature of such specimen. These soft parts are reported as most unusual: 'Il paroît que cet animal se partage en deux parties: dans l'une est son col, avec sa tête garnie de deux cornes, & de ses yeux en dehors; dans l'autre est situé le reste de son corps terminé par un opercule' (Argenville, 1762, p. 82). At any rate, the soft parts of this open-coiled land snail in Argenville (1757, 1780) are surely invented, and thus Müller (1774) was wrong in maintaining that his *H. scalaris* was different from the shell in that figure. It appears also that Müller was fully aware of the fact that the traits separating his *H. scalaris* from other specimens of its kind (i.e. conspecific individuals of *H. aspersa*) were of a unique, individual nature. Likewise, Born's *Cornu copiae* appears to be a junior synonym of *H. scalaris*. In a later edition, Born (1780) kept placing great value on his *Cornu copiae*, this time illustrating it, also in two views, inside an elaborate frame. Judging from the figures published by Born, *Cornu copiae* could be a teratological individual of either *H. pomatia* or *H. aspersa*, or even *Eobania vermiculata* (Müller, 1774). However, because from its description it appears to be the same as *H. scalaris* Müller, 1774, and given that the latter was clearly stated to be an individual, albeit splendid aberration, it follows that *Cornu copiae* is indeed based on a teratological specimen that was known as such. Thus, the binomen *Cornu copiae* is objectively not valid according to Article 1.3.2 of the Code and there is no need for either Schileyko's (2006) claim that is should be considered a nomen oblitum (correctly dismissed by Cowie, BZN **68**: 97–104), or Cowie's proposal.

The teratological nature of *Cornu copiae* was unanimously agreed upon by all workers during nearly two centuries. The opinions of Deshayes (1832, 1838), Beck (1838), Gray (1847), Forbes & Hanley (1853) and Taylor (1910) are reviewed by Cowie (BZN **68**: 97–104), but it is worth adding a few more. Pfeiffer (1841) didn't mention it, even when dealing with other parts of Born's books. Later on, Pfeiffer (1848, p. 242) was exhaustive and thus listed under *Helix aspersa* its 'var. δ', a monstrosity with detached whorls that fits exactly what Born (1780) showed ('Monstrosa, scalaris vel anfractibus omino solutis: Born Mus. t. 13. f.10.11.'). Leach (1852, Pl. II, fig. 2) shows a live individual of the very rare 'open-turreted variety'. Germain (1930, p. 35) mentioned indeed (against Cowie's statement) the cornucopia monstrosity that occasionally affects large helicids: 'Enfin, exceptionnellement, la coquille, entièrement déroulée, affecte assez nettement la forme d'une corne d'abondance; elle est cératoïde (*Helix pomatia* L., *H. aspersa* Müll.).' Gasull (1972, lám. 1, fig. 1) showed a cornucopioid *Cryptomphalus aspersus* from Mallorca.

The proposal to use *Cornu* (as subgenus) instead of its purported junior synonym *Cryptomphalus* was first made by Pilsbry (1948: 1091). As Cowie (BZN **68**: 97–104) points out, the lack of followers to this claim may have been due to this being stated in the 'Additions and Corrections' at the very end of his monumental work. However, what Pilsbry actually says about *Cornu* is relevant: 'This name was not used in my text because I thought that a genus founded on an abnormal specimen is

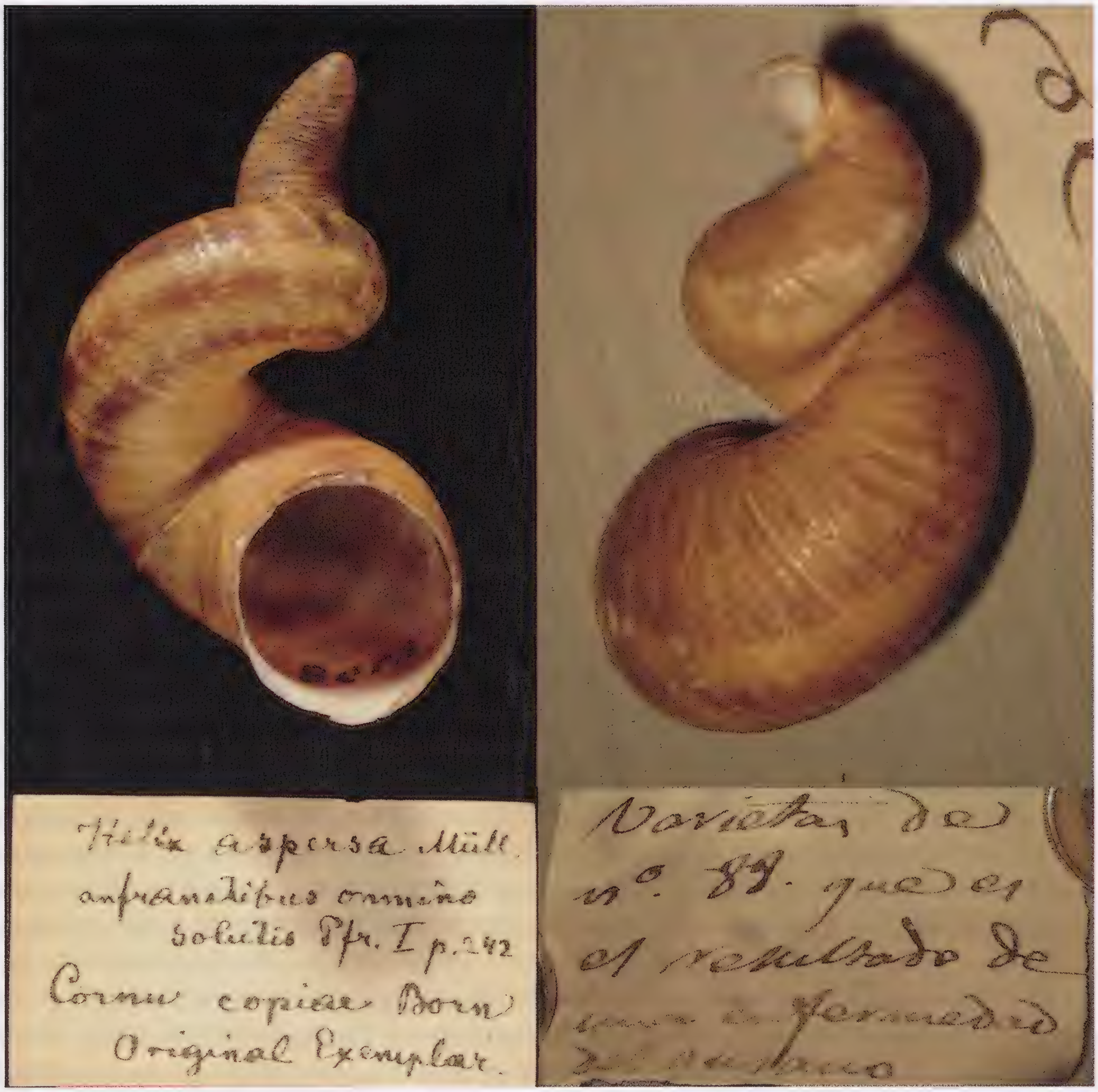

Fig. 1. Cornucopioid *Cryptomphalus aspersus* (Müller, 1774). Left, type specimen of *Cornu copiae* Born, 1778 in the Natur historisches Museum Wien (37.4 mm) (courtesy of Anita Escher, curator of molluscs). Right, specimen in the Salvador Cabinet (ca. 1750), at the Botanical Institute of Barcelona (36.3 mm).

invalid. However, nothing in the International code seems to exclude such names.' This is exactly what Article 1.3.2 of the current Code addresses. As shown above, *Cornu copiae* was indeed intended for a teratological specimen as such (contrary to the claim by Cowie, BZN **68**: 97–104).

The second stand to resurrect *Cornu* was by Waldén (1976). This apparently stems from a mistaken, superficial reading of Born's work, without considering the above-mentioned references given therein to previous works. The same error was made by Gerber (2000), who claimed that Born considered *Cornu copiae* a valid and distinct species. Gerber makes an untenable leap between the modern concept of biological species and the individual curiosity named by Born during the Enlightment era of natural history cabinets. This was followed uncritically by Falkner et al. (2001). Likewise, Roth & Sadeghian (2003) backed the use of *Cornu*, having failed to find any evidence of an indication of the teratological nature of *Cornu copiae* in distinction to other individuals of the same species (ignoring the reference to Müller's *H. scalaris*). Anderson (2005) justified the use of *Cornu* based on both the previous choice by Waldén (1976) and the apparent need for a genus-level name for *H. aspersa*: 'The generic name for the common garden snail has been a source of controversy for some time. At least three alternatives are circulating in the literature, including *Cantareus* Risso and *Cryptomphalus* Charpentier, which are now generally applied to species in different helicid clades from *aspersa*.' However, this is incorrect, because *H. aspersa* is indeed the type of *Cryptomphalus*. Thus, nothing actually sustains the purported availability of *Cornu*. It is troublesome that such an error can slip into regional species lists with such ease (e.g. Falkner et al., 2001; Roth & Sadeghian, 2003; Stanisic et al. 2010). Nevertheless, a few publications can still be found where the name *Cornu aspersum* is actually used (see references in Cowie, BZN **68**: 97–104).

Without taking into account the reference to previous works, and looking only at the figures by Born (1778, 1780), *Cornu copiae* could in fact be any cornucopioid specimen belonging to the group formed by *Helix* s.s., *Cryptomphalus*, *Cantareus* and *Eobania*. Remarkably, none of the proponents of *Cornu* appear to have actually examined any type material. Fortunately, the holotype of *Cornu copiae* is extant. Thanks to Anita Escher, Curator of Mollusks at the Natural History Museum in Vienna, it has been located (Fig. 1, left). Inside the aperture, the word 'Born' is written in ink. It is indeed an open-coiled (i.e. 'cornucopioid') specimen of *Helix aspersa*. The accompanying label refers to its teratological nature as already indicated by Pfeiffer (1841), who may have actually studied this type specimen.

A remarkably similar specimen exists in the Salvador Cabinet, now housed at the Botanical Institute of Barcelona (IBB). This cabinet (Camarasa Castillo, 2004; Ibáñez, 2006) was built by three generations of the enlightened Salvador family. The cabinet was closed in 1854, the shell collection is still in good condition and retains many of the original labels. A preliminary inventory of this malacological collection showed that it contains specimens originating in many distant countries (Hernández et al., 2003). Indeed, it was mentioned by Argenville (1780, p. 314) as one of the most important natural history cabinets of his time. The Salvadors maintained an intense exchange of letters and specimens with naturalists of all Europe, including Linnaeus – who named the plant genus *Salvadora* after them. Also preserved are documents relative to the acquisition of shells from James Petiver and Hans Sloane – who acquired several important natural history collections and left his own to be the origin of the British Museum. I have examined the Salvador Cabinet thanks to the kind interest of its custodians, Josep Montserrat, Neus Ibáñez and staff at IBB. A central cell in one of the shell drawers contains two odd *H. aspersa* specimens: a scalariform (very high-spired but with whorls attached) and a cornucopioid. The latter has its apex broken, but is surprisingly similar to the holotype of *Cornu copiae* in Vienna (Fig. 1, right). The accompanying label, written in Spanish, states that this is a variety of *Helix aspersa* (normal specimens have number 88 written in ink and also on their label) 'resulting from an illness of the worm' ('Varietas de n° 88 que es el resultado de una enfermedad del gusano'). Older labels and documents in the Salvador Cabinet are all written in Catalan, but this was forbidden in official paperwork after the defeat of the Austrian and Catalan army in 1714. Thus, the cornucopiod's label was likely written when the stylish drawers intended for public exhibition were set.

The Vienna and Barcelona cornucopioids may come from the same population. This is a likely possibility, because Born studied in Vienna the natural history collection that was the origin of the present Natural History Museum (Riedl-Dorn, 1999). Most of it had been bought by the Austrian Emperor in 1749 from the Duke of Tuscany. That collection was largely assembled by Giovanni de Baillou (also known as Johann Ritter von Baillou or Jean Chevallier de Baillou), who had become director of the Uffici in Florence in 1735 and followed his cherished objects to become the first director of the Hof Cabinet. The cornucopioid shells were an extremely rare and sought after curiosity, and it is quite likely that both Argenville and Baillou obtained them from the Salvadors. At any rate, what the Salvador cornucopioid proves is that the teratological nature of such a land shell was public knowledge among learned naturalists of the Enlightenment. All the evidence suggests that Born must have been aware of the fact that his *Cornu copiae* was representing a teratological (and splendid) variation.

It is therefore my opinion, that the Commission should not rule on Case 3518 as proposed by Cowie. The proposal to make *Cornu* available is not based on actual facts, because *Cornu copiae* was based on a teratological specimen known from the start as such. Therefore, the current Code solves this case without any extraordinary ruling. Moreover, the use of *Cornu* (instead of *Cryptomphalus*) has been promoted by a minority of authors in the last decade, on the basis of mistaken reading of the literature, no consultation of type material, and forced interpretation of early zoological nomenclature. Such a proposal would vulnerate stability, unicity and universality of the names of animals, and thus should be disregarded.

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Comments on the proposed precedence of *Maculinea* van Eecke, 1915 over *Phengaris* Doherty, 1891 (Lepidoptera, LYCAENIDAE)

(Case 3508: see BZN **67**: 129–132, 245, 315–319)

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We support the application by Balletto et al. (BZN **67**: 129) to give precedence to *Maculinea* van Eecke, 1915 over *Phengaris* Doherty, 1891. The three main grounds are: (i) The importance to a wide range of users of the *Maculinea* butterfly-ant interactions that have been the subject of many recent papers in important biological journals and in which the generic name *Maculinea* has almost always been employed; (ii) The almost universal use of the generic name *Maculinea* for several butterfly species of considerable importance to conservationists; (iii) Protection of the stability of an animal name in use by numerous non-taxonomist stakeholders, whose opinion of, and respect for, zoological nomenclature and taxonomy in general may depend on the stability of just a few familiar names.

In arguing against the application, Fric et al. (BZN **67**: 315) remarked that the authors of Case 3508 'fail to provide a taxonomically feasible way to preserve the name *Maculinea*'. However, there is no known taxonomic impediment to a straightforward application to plenary power to give precedence to *Maculinea* over *Phengaris*.

Fric et al. also gave a detailed account of the nomenclatural history of the *Maculinea* butterflies, but, with the exception of the idiosyncratic action of Nässig

(1995) in synonymising *Maculinea* with *Glaucopsyche*, most of the detail relates to the period roughly up to the middle of the twentieth century. More recent work has seen *Maculinea* used in a majority of cases, particularly in the biological, evolutionary and conservation literature (as opposed to the strictly taxonomic). We do not agree with Fric et al.'s dismissal of the significance of prevailing usage in field guides, distribution atlases and other publications that they consider not to be of 'major scientific importance' (p. 315). On the contrary, the taxonomic community is by definition the most likely to understand and accept nomenclatural change, and it is the much larger non-taxonomic user base and their needs that the principle of stability seeks to protect. Recent experience has shown (e.g. Vane-Wright, 2011) that many non-taxonomic users are increasingly using alternative 'vernacular' nomenclatures (that lack the advantage of universality) and moving away from the use of scientific nomenclature, which is popularly perceived as legalistic, complicated and unstable. Any changes in the names of well-known organisms serve to reinforce this undesirable trend. For example, the recent uptake of *Phengaris* by some specialists and the continued use of *Maculinea* by others may be resulting in more use of the vernacular name 'Large Blue' (meaningless or misleading outside the U.K.) in recent British conservation literature. Furthermore, if Balletto et al. (2010) were to be unsuccessful, conservationists and ecologists, especially, are likely to continue to employ *Maculinea*. This would have the effect of dividing nomenclature into 'official' and 'practical' usages with detriment to the perception of the Code and Zoological Nomenclature among non-taxonomic communities.

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I would like to support the proposal to conserve the name *Maculinea* as this genus of butterflies is so important, not just for Lepidoptera taxonomy but on account of its interest in myrmicophily among LYCAENIDAE.

Comments on the proposed conservation of usage of *Testudo gigantea* Schweigger, 1812 (currently *Geochelone (Aldabrachelys) gigantea*; Reptilia, Testudines)

(Case 3463; see BZN **66**: 34–50, 80–87, 169–186, 274–290, 352–357; **67**: 71–90, 170–178, 246–254, 319–331; **68**: 72–77, 140–143)

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Frazier & Matyot (2010; BZN **68**: 140–143) have attempted to sideline the putative lectotype of the Aldabra tortoise, the Leiden specimen collected by Dussumier, by arguing that it cannot be considered suitable as its provenance is uncertain on both historical and genotypic (DNA) grounds. In relation to the correct name for the species in question, there are two issues they have not considered.

1. If they are correct that the uncertain provenance of RMNH 3231 makes this specimen an unsuitable lectotype, it follows that the next available name, i.e. *Testudo elephantina* Duméril & Bibron, 1835 should be (re-)adopted, its type locality restricted to Aldabra by Günther in 1877 (see Bour & Pritchard, BZN **66**: 169–174, 2009). Their arguments provide no support for, nor have they any bearing on, the conservation and continued use of *Testudo gigantea* Schweigger, 1812 for the Aldabra tortoise, a move Frazier himself initiated. That decision depends entirely on the status of a quite different specimen, MNHN 9554, and the Commission's verdict on that, as discussed in numerous previous submissions in relation to this case.

In that context it should be noted that quite recently a Portuguese scholar, Luis Ceríaco, examined MNHN 9554 in connection with a study on the surviving specimens from the former 'Cabinet d'Ajuda' in Lisbon. He concluded that this tortoise is clearly stuffed in the manner used for large specimens in that establishment at the end of the 18th century (Roger Bour, pers. comm. 13 September 2011). This is a new element adding to the already very strong evidence that this specimen is the very Brazilian tortoise 'e collectione regia Libonensi' described by Schweigger in 1812 as *Testudo gigantea*.

It is certainly unfortunate when the rediscovery or re-identification of a type transfers a familiar name to a different species, but as I and others have commented before (e.g. BZN **67**(1):79–81), the same process with the Galapagos tortoises, equally iconic, did not incur the extraordinary reaction (and polarisation) that has been spawned by Case 3463, nor indeed any of world-wide confusion predicted for the Aldabra case. Why are people prepared readily to lose the equally long-established *elephantopus* but are yet so attached to *gigantea* ?

2. The fact that a type specimen was collected in an area where it is not native is not *per se* an impediment to its use in nomenclature, as Frazier & Matyot imply, even if they do not say so outright. Indeed another well-known Indian Ocean tortoise *Astrochelys yniphora*, a Madagascar endemic, was originally described from a specimen traded into and collected on Grande Comore/Ngazidja (Bour, 2007). Another Indian Ocean example is that of the small bird *Lonchura striata* (Linnaeus, 1766), a native of India and south-east Asia, which was first collected in the island of Réunion to which it had been introduced (e.g. Cheke, 2009). Hence the collection locality of the type (e.g. Grande Comore, Réunion) need not reflect the true natural

range of the species (e.g. Madagascar, India etc.). However as there are several recognised races of the bird, the Réunion specimen had at some later time to be assigned, by matching to other populations, to a source locality, Ceylon, (Baker, 1926) to create a nominate race (although Stuart Baker restricted the type locality to Ceylon/Sri Lanka, the range of the subspecies extends throughout southern India, and the birds introduced to Réunion probably originated in the French trading post at Pondicherry on the Tamil coast south of Madras/Chennai). The same issue applies to the lectotype of *Testudo dussumieri.* The Code specifies how to treat a specimen from outside its natural range, including an introduced self-sustaining or captive-breeding population: Article 76.1.1 states that 'If capture or collection occurred after transport by artificial means, the type locality is the place from which the name-bearing type, or its wild progenitor, began its unnatural journey'. Thus, in full accordance with the Code, it is entirely in order for the type of an Aldabra tortoise to have the granitic Seychelles, Mauritius or Réunion as its collection locality, counter-intuitive as this may seem. Some early types inevitably have no unequivocal collection locality at all.

As I have argued previously (BZN **67**: 79–81), in a pertinent note Frazier & Matyot conspicuously failed to cite in their BZN review, it is highly probable that an Aldabra/Seychelles tortoise collected on either the granitic Seychelles or the Mascarenes in the mid-1820s would have come from Aldabra, and Frazier & Matyot are somewhat selective in their choice of sources to imply an equal likelihood of it being a native of the granitic Seychelles. Although native Seychelles animals were still being exported in 1807, as Frazier & Matyot (2010) note, by 1815, as I pointed out, Aldabran animals were being imported into the granitics in large numbers precisely because the native tortoises had become too scarce to be worth hunting (full references in my earlier note). It should be remembered that these animals were commercially transported to be sold and eaten, not as pets to be kept and nurtured for years, so earlier imports from the granitics would mostly have been consumed. At ca. 3 years old RMNH 3231, probably collected ca. 1825, would have hatched around 1822–3 at the earliest, and hence is unlikely to have originated in the granitics, although another, smaller, juvenile Dussumier collected (MNHN 1942), stated as being from the Seychelles by Duméril & Bibron, is considered somewhat tentatively to be a granitic native by Bour (2006 & refs. therein) and firmly assigned there with no additional identification evidence by Frazier & Matyot (2010); DNA extraction failed on this specimen (Austin et al., 2003). Frazier & Matyot also failed to acknowledge, as I also pointed out, that the locals on the recipient islands were then fully aware of the provenance of animals being imported (their origin advertised in sales), and Dussumier would certainly have been told where his specimen originated. Hence, whatever Temminck's occasional shortcomings on provenance, that is not an *a priori* reason to disbelieve his and Schlegel's designation in this specific case. As I have said previously (BZN **67**: 79–81) 'why invent the then extremely obscure (to Europeans) locality of Aldabra if there was no reason to do so?' - the obvious inference is that at the time of transfer to Leiden the Paris museum had information directly from Dussumier that Aldabra was the (ultimate) origin of this specimen.

Frazier & Matyot (2010) profess to being amazed that I should suggest it, but the fact that RMNH 3231 cannot be assigned to one or other source on its mtDNA or (according to them) on morphology is of no importance at the level of species, as animals from both groups of islands are considered by almost everyone to be conspecific (e.g. Austin et al., 2003). Hence, since most authors are agreed that the specimen is of the species native to both Aldabra and the granitic Seychelles, it is perfectly proper to use it as the lectotype, despite its actual provenance being uncertain. Given that some authors split the species into Aldabra and granitic Seychelles forms (as subspecies) and a handful consider them species, it does become necessary either to restrict *dussumieri* to one or other group of islands as original source (irrespective of where it was collected), or invalidate it (which would take us back to *T. elephantina* for Aldabra animals). Recent study of juveniles of the three existing morphotypes (Aldabra and two presumed to be from the granitic islands), reared in identical conditions (Gerlach & Bour, 2003; Gerlach, 2011), shows that they are statistically distinguishable, and most can be separated individually. RMNH 3231, a juvenile of straight carapace length 119 mm (Bour & Pritchard, unpublished; see photo with scale in Grünewald, 2009), is considered to be a juvenile Aldabra tortoise by the only three herpetologists who have personally studied the specimen, Bour, Pritchard & Hoogmoed (Hoogmoed et al., 2010; further supporting references in BZN **67**: 79–81). Furthermore its body co-ordinates, using Gerlach's (2011) analysis, closely fit the Aldabra morphotype, not those presumed to be from the granitic islands. A figure showing RMNH's coordinates superimposed on Gerlach's (2011) figures for living tortoises is available from the author. Its co-ordinates are well within the 95% envelope for dorsal and lateral growth patterns, and only just outside for the plastral pattern, for which in any case the morphotypes are not clearly separable until reaching the 31–40 cm size range (Gerlach, 2011). Given the tradition that the specimen came from Aldabra, the long-standing morphological support for that view from those who have studied it, and with particular emphasis on the additional morpho-statistical evidence, I formally propose that the type locality of *Testudo dussumieri* Gray, 1831, represented by the lectotype in Leiden, RMNH 3231, be restricted to the Aldabra atoll. The specimen is fully illustrated with all labels by Grünewald (2009).

A further point is that the fact that the mtDNA haplotype exhibited by RMNH 3231 is not currently found on Aldabra proves nothing. The animal was collected long before the late 19th century bottleneck when the population was close to extinction (Stoddart & Peake, 1979; Bourn et al., 1999) which could have caused the loss of haplotypes (as already noted by Palkovacs et al., 2003). Furthermore it could easily have come from an island (Polymnie, Picard [later re-introduced]) where tortoises, and thus possibly some haplotypes, were wiped out entirely. Frazier & Matyot did not mention that Austin et al. (2003) found 3 other individuals with haplotypes 1–4 substitutions adrift from the majority, 2 alive in the Seychelles (and considered by the NPTS (Nature Protection Trust of Seychelles) to be granitic natives), and one labelled 'Aldabra' in the London Natural History Museum. Although the 'B' haplotype is unique, so are the 'C', 'D' and 'E' examples, thus reducing the significance of the small (2 substitutions) difference seen in RMNH 3231. Balmer et al. (2011), studying the genetic variation in tortoises on Aldabra, did not apply their microsatellite analysis to any museum specimens or to living animals thought to originate in the granitic islands, though previous work (Palkovacs et al., 2003) suggests variation is minimal.

In conclusion, Frazier & Matyot (BZN **68**: 140–143) seem to have confused collection locality, type locality and geographical origin. Ideally these should be the same, but with old specimens, of species that were traded around, released and/or bred by humans, they often are not.

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I would like to thank Justin Gerlach for adding specimen RMNH 3231 to his morphological growth plots for Aldabra and presumed granitic Seychelles tortoises, and supplying the diagram modified from his 2011 paper with Dussumier's specimen added. Roger Bour contributed an important new observation on the holotype of *Testudo gigantea* and made useful comments on a draft.

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The locality of the lectotype of *Testudo dussumieri* Gray, 1831

The latest comment by Frazier & Matyot (BZN **68**: 140–143), in reaction to the preceding one by Hoogmoed (BZN **68**: 72–77), cannot go unanswered. The main point, time and again raised by Frazier & Matyot, is that the locality Aldabra is unreliable and is actually likely to be Mahé, with the argument (p. 140) that 'There is no evidence that J.-J. Dussumier, considered to be the collector of the lectotype, ever visited Aldabra, but he is definitely known to have made collections on Mahé, in the granitic Seychelles.' No doubt this is correct, but Dussumier was a merchant, and merchants buy interesting things from interesting places wherever they come across them. Museums all over the world are full of specimens obtained that way, and I can give a great many examples from the Leiden Museum that were received from collectors or travellers who did not visit the localities from where (part of) their material originated. Austin et al. (2003, p. 1421) write, quoting 19th-century references, that tortoises from Aldabra were shipped to the central Seychelles and other islands in those days, often in great numbers (see also Bour et al., BZN **67**: 72–73; Cheke, BZN **67**: 79–81, and Hoogmoed et al., 2010, p. 176). Even Frazier & Matyot (2010, p. 140) themselves stated that Dussumier was also known to have visited the Mascarene Islands of Mauritius and Ile Bourbon (La Réunion), where thousands of tortoises from the granitic Seychelles, as well as from Aldabra, had been imported; they confirm this on p. 142. So the fact that Dussumier himself never visited Aldabra cannot be put forward as an argument against the recorded provenance of this tortoise. Strangely, whereas Frazier in his letter to me of 7 July admits that 'We have never said that it is impossible that Dussumier somehow (perhaps by trade, perhaps by purchase, perhaps by exchange?) obtained a tortoise from Aldabra', the authors again ignore this obvious explanation in their latest comment, just saying (p. 141) that 'there is no mention of any Dussumier tortoise from Aldabra'. In Leiden there is, disqualified as it may be by Frazier & Matyot.

These authors elaborate on three points: the very brief description by Gray (1831b) which they call (p. 141) 'confused for many reasons', the absence of an original label, and the data published by Schlegel in Temminck & Schlegel (1834) (see Tschudi, 1838 for Schlegel's sole authorship) which they mistrust, erroneously quoting Hoogmoed (BZN **68**: 74) in saying (p. 141) 'the source of this is unknown'. I will address each of these subjects.

(1) Gray (1831b). – Gray's original description is very brief indeed, but not at all 'confused'. Gray enumerates the species of reptiles known to him, starting with the genus *Testudo* (p. 8), number 1 (p. 9) being '*Test. Indica,* (*Indian Tortoise.*)'. He mentions the specimens seen by him under the names by which they were arranged in the various collections. The Leiden one appears as follows: '*Junior*. Testa nigra margine laterali angulato, areolis magnis. *Test. Dussumieri*, Schlegel MSS. (v. Mus. Leyd.) – Pet. Gaz. t. 76, f. 4.' (the latter reference does not relate to the Leiden animal); and further: 'Habitat in India Orientali, *Gen. Hardwicke*, Insula Mauritiana, Insula Aldebra, *M. Dussumiere*.' Gray had not the intention of describing a new species, but referred to a specimen in the Leiden Museum (v. = vide = see) identified by him as *T. indica*, and bearing the manuscript name '*T. Dussumieri*' apparently used by Schlegel, then the Curator of Vertebrates and the herpetologist of the Leiden Museum. These manuscript notes (MSS being plural) could have been labels or any other written records relating to the specimen.

(2) Labels. – Regarding the lack of an original label: in the great majority of collections from the early 19th century, very few original labels (if there were any; data were often provided in the form of letters or other notes) have been preserved,

and the Leiden Museum is no exception, unfortunately. Regarding alcohol specimens: many labels in jars faded with time, so had to be copied for that reason alone, or were glued to the outside of jars and could not be replaced when specimens were rearranged. New labels would bear the scientific names then in use, and in most cases did not repeat manuscript names that had become obsolete. This explains why the name *Testudo Dussumieri* was not entered onto the oldest label of this tortoise that still exists; in the meantime, both Gray and Schlegel had identified the specimen as *T. indica*. The same holds true for the first record in the museum's written catalogue, which was composed much later.

(3) Schlegel (1834). – A few years after Gray's (1831b) synopsis, the locality of this tortoise was specified by Schlegel, in the reptile volume of the *Fauna Japonica* edited by Temminck & Schlegel; the section on chelonians (pp. 1–80) was published in January 1834, see Holthuis & Sakai (1970, p. 75). Following Gray, Schlegel too, included the specimen in *Testudo indica*: 'This institution has received another very young individual from the Paris Museum, communicated under the name of Test. Dussumieri, brought back by the traveller whose name it bears, from the island of Aldebra, situated in the north of the Mozambique Channel.' (transl. from French). This is in line with Gray's reference to the manuscript name *'T. Dussumieri'* – even the spelling 'Aldebra' is the same. This text may be regarded as relatively good provenance for the specimen and support for the view that these data are genuine and had been provided by Paris, along with the accompanying manuscript name. Frazier & Matyot conclude (p. 141): 'As Hoogmoed explained (BZN **68**: 74 and following pages), it is unknown on what Temminck & Schlegel based this statement', and further on: 'The basis for his assertion now rests on Temminck & Schlegel's (1834) above-quoted statement, although Hoogmoed acknowledges that the source of this is unknown'. This is a misquotation. On the contrary, Hoogmoed says (p. 74): 'Temminck & Schlegel (1834) made the published, printed statement about name, collector, locality and specimen on the basis of documentation (in whichever form) they had received from Paris with the specimen concerned', i.e. the information had been 'communicated' by the Paris Museum with the specimen in the form of a label or some other document.

The identity of the lectotype of *Testudo dussumieri* (Gray, 1831)

Frazier & Matyot did not check the identity of RMNH 3231 themselves, either by studying the animal or by asking another herpetologist to provide a clear description, measurements and photographs. The tortoise has been studied by several herpetologists, professionals and knowledgeable amateurs, in recent years R. Bour, P.C.H. Pritchard, M.S. Hoogmoed and F. Grünewald. They have all independently identified it as an Aldabra tortoise; see Grünewald (BZN **67**: 178) and Hoogmoed (BZN **68**: 72). Excellent colour photographs have appeared in various publications, e.g. Gerlach (2004, p. 68) in a book reviewed by Frazier (2006b, p. 370 – 'The photographs of rarely seen type specimens are valuable') and Grünewald (2009, p. 137–138) who gives four photographs showing measurement scales. Frazier & Matyot have not criticized the findings of these authors, nor discussed the distinguishing characters used, and not commented on the published photographs. It is a young animal; even if this might be difficult to distinguish from similar specimens from other islands, that should be clearly stated and discussed. For want of any morphological evidence to the contrary, there is no reason to doubt the identifications by these herpetologists.

Finally, there are the genetic studies (Austin et al., 2003; Balmer et al., 2010) which have proved inconclusive. Frazier & Matyot (2010, p. 143) rightly conclude that 'the taxonomic identity of the lectotype remains unresolved'; i.e. as far as genetic studies are concerned.

Conclusions

In their paper and comments, Frazier & Matyot reiterate that the provenance of RMNH 3231 is 'uncertain', but this uncertainty results from disbelieving the data accompanying the specimen. With so much uncertainty surrounding the lectotype, in their opinion the name *Testudo dussumieri* Gray, 1831 should really be suppressed. Whatever arguments there may be in favour of that on other grounds, any possible doubt concerning the provenance of the lectotype is not a sufficient reason.

Additional references

Balmer, O., Ciofi, C., Galbraith, D.A., Swingland, I.R., Zug, G.R. & Caccone, A. 2010. Population genetic structure of Aldabra giant tortoises. *Journal of Heredity*, Advance Access August 30, 2010: 1–9.

Frazier, J. & Matyot, P. 2010. On the identity of Monsieur Dussumier's Dutch tortoise and the lectotype of *Testudo dussumieri* Gray, 1831. *Zootaxa*, **2665**: 29–50.

Gerlach, J. 2004. Giant tortoises of the Indian Ocean. The genus *Dipsochelys* inhabiting the Seychelles Islands and the extinct giants of Madagascar and the Mascarenes. *Frankfurter Beiträge zur Naturkunde/Frankfurt Contributions to Natural History*, **21**: 1–207. Edition Chimaira, Frankfurt am Main.

Grünewald, F. 2009. Museumcollecties. RMNH 3231 (*Dipsochelys dussumieri*) Gray, 1831. *Trionyx*, **7**: 136–142.

Holthuis, L.B. & Sakai, T. 1970. Ph. *F. von Siebold and Fauna Japonica. A history of early Japanese zoology*. 323 pp. Academic Press of Japan, Tokyo.

Hoogmoed, M.S., Gassó Miracle, M.E. & van den Hoek Ostende, L.W. 2010. Type specimens of recent and fossil Testudines and Crocodylia in the collections of the Netherlands Centre for Biodiversity Naturalis, Leiden, the Netherlands. *Zoologische Mededelingen Leiden*, **84**: 159–199.

Smeenk, C. 2009. Has one of Captain Cook's possums landed in Leiden? The possible holotype of *Pseudocheirus peregrinus* (Boddaert, 1785). *Zoologische Mededelingen Leiden*, **83**: 723–740.

Temminck, C.J. 1821. Calao à casque sillonné. *Buceros sulcatus*. Temm. *In*: Temminck, C.J. & Le Baron Meiffren Laugier de Chartrouse (Eds.), *Nouveau recueil de planches coloriées d'oiseaux, pour servir de suite et de complément aux planches enluminées de Buffon.*, Vol. 2. 2 pp., 1 pl. [unnumbered]. F.G. Levrault, Paris/Strasbourg & Legras Imbert & Comp., Amsterdam.

Temminck, C.J. 1824. Première monographie. Sur le genre Phalanger. – *Phalangista*. (Geoff.) (1). *In*: *Monographies de mammalogie, ou description de quelques genres de mammifères, dont les espèces ont été observées dans les différens musées de l'Europe.* Tome premier: 1–20, pls I-IV. G. Dufour & Ed. D'Ocagne, Paris/Amsterdam.

Schlegel, H. 1834. Les chéloniens. *In*: Temminck, C.J. & Schlegel, H. (Eds.), *Fauna Japonica auctore Ph. Fr. de Siebold. Reptilia elaborantibus C.J. Temminck et H. Schlegel*. 80 pp., 9 pls. J.G. Lalau, Lugduni Batavorum.

Tschudi, J.J. 1838. Classification der Batrachier, mit Berücksichtigung der fossilen Thiere dieser Abtheilung der Reptilien. *Mémoires de la Société des Sciences Naturelles de Neuchâtel*, **2**: 1–99, pls 1–6.

OPINION 2286 (Case 3509)

Cetonia squamosa Gory & Percheron, 1833 (currently *Aethiessa squamosa*; Insecta, Coleoptera): specific name conserved

Abstract. The Commission has conserved the specific name *Cetonia squamosa* Gory & Percheron, 1833 by ruling that it is not invalid by reason of being a junior homonym of *C. squamosa* Lefebvre, 1827 (currently *Protaetia (Netocia) squamosa*, also CETONIIDAE), endemic in southern Italy including Sicily.

Keywords. Nomenclature; taxonomy; CETONIIDAE; *Protaetia squamosa*; *Aethiessa squamosa*; flower chafers; Southern Italy; Sicily; North Africa.

Ruling

(1) Under the plenary power it is hereby ruled that the name *squamosa* Gory & Percheron, 1833, as published in the binomen *Cetonia squamosa*, is not invalid by reason of being a junior primary homonym of *squamosa* Lefebvre, 1827, as published in the binomen *Cetonia squamosa*.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *squamosa* Lefebvre, 1827, as published in the binomen *Cetonia squamosa*;
  (b) *squamosa* Gory & Percheron, 1833, as published in the binomen *Cetonia squamosa*, with the endorsement that it is not invalid by reason of being a junior primary homonym of *squamosa* Lefebvre, 1827, as published in the binomen *Cetonia squamosa*, as ruled in (1) above.

History of Case 3509

An application to conserve the specific name *Cetonia squamosa* Gory & Percheron, 1833 by ruling that it is not invalid by reason of being a junior homonym of *C. squamosa* Lefebvre, 1827 (currently *Protaetia (Netocia) squamosa*, also CETONIIDAE, endemic in southern Italy including Sicily) was received from Ignazio Sparacio (*Palermo, Italy*) on 30 November 2009. After correspondence the case was published in BZN **67**: 133–136 (2010). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on this case.

Decision of the Commission

On 1 June 2011 the members of the Commission were invited to vote on the proposals published in BZN **67**: 134. At the close of the voting period on 1 September 2011 the votes were as follows:

Affirmative votes – 23: Ballerio, Bogutskaya, Brothers, Fautin, Grygier, Halliday, Harvey, Kojima, Kottelat, Kullander, Krell, Lamas, Minelli, Ng, Pape, Papp, Patterson, Rosenberg, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 1: Bouchet.

Alonso-Zarazaga, Lim, Pyle and Štys were on leave of absence.

Voting FOR, Ng said he felt that the proposed action would cause the least disruptions overall.

Voting AGAINST, Bouchet said the application (para. 3) indicated that there was a very limited usage of the names involved, and he favoured a strict application of Article 60.3.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

squamosa, Cetonia, Gory & Percheron, 1833, *Monographie des Cétoines et genres voisins, formant, dans les familles naturelles de Latreille, la division des Scarabées Mélitophiles.* 403 pp. Baillière, Paris, pp. 60, 232.

squamosa, Cetonia, Lefebvre, 1827, *Mémoires de la Société Linnéenne* de Paris, **6**: 103.

OPINION 2287 (Case 3513)

Chaetosoma Westwood, 1851, *Apodasya* Pascoe, 1863 and CHAETOSOMATIDAE Crowson, 1952 (Insecta, Coleoptera): usage conserved

Abstract. The Commission has conserved usage of the junior homonym *Chaetosoma* Westwood, 1851 and of the junior synonym *Apodasya* Pascoe, 1863 over the newly discovered older name *Chaetosoma* Chevrolat, 1843. In addition, the Commission has also conserved the beetle family-group name CHAETOSOMATIDAE Crowson, 1952 by suppressing the older but permanently invalid nematode name CHAETOSOMATIDAE Claus, 1872.

Keywords. Nomenclature; taxonomy; Coleoptera; Cucujiformia; CHAETOSOMATIDAE; *Chaetosoma*; *Apodasya*; *Chaetosoma pilosum*; *Chaetosoma scaritides*.

Ruling

(1) Under the plenary power it is hereby ruled that the following names are suppressed for both the Principle of Priority and the Principle of Homonymy:
  (a) the generic name *Chaetosoma* Chevrolat, 1843;
  (b) the family-group name CHAETOSOMATIDAE Claus, 1872 (originally proposed as CHAETOSOMIDAE).

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
  (a) *Chaetosoma* Westwood, 1851 (gender: neuter), type species by monotypy *Chaetosoma scaritides* Westwood, 1851 (Insecta, Coleoptera);
  (b) *Apodasya* Pascoe, 1863 (gender: feminine), type species by original designation *Apodasya pilosa* Pascoe, 1863 (a junior subjective synonym of *Chaetosoma pilosum* Chevrolat, 1843) (Insecta, Coleoptera).

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *scaritides* Westwood, 1851, as published in the binomen *Chaetosoma scaritides* (specific name of the type species of *Chaetosoma* Westwood, 1851);
  (b) *pilosum* Chevrolat, 1843, as published in the binomen *Chaetosoma pilosum* (valid specific name of the type species of *Apodasya* Pascoe, 1863).

(4) The name CHAETOSOMATIDAE Crowson, 1952, type genus *Chaetosoma* Westwood, 1851 is hereby placed on the Official List of Family-Group Names in Zoology (Insecta, Coleoptera).

(5) The name *Chaetosoma* Chevrolat, 1843 (gender: neuter), type species by monotypy *Chaetosoma pilosum* Chevrolat, 1843, as suppressed in (1)(a) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

(6) The name CHAETOSOMATIDAE Claus, 1872 (originally published as CHAETOSOMIDAE), type genus *Chaetosoma* Claparède, 1863, as suppressed in (1)(b) above,

is hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology (Nematoda).

History of Case 3513

An application to maintain usage of the junior homonym *Chaetosoma* Westwood, 1851 and of the junior synonym *Apodasya* Pascoe, 1863 over the newly discovered older name *Chaetosoma* Chevrolat, 1843, and conserve the beetle family-group name CHAETOSOMATIDAE Crowson, 1952 by suppressing the older but permanently invalid nematode name CHAETOSOMATIDAE Claus, 1872, was received from Yves Bousquet and Patrice Bouchard (*Canadian National Collection of Insects, Arachnids and Nematodes, Agriculture and Agri-Food Canada, Ottawa, Ontario, Canada*) on 1 February 2010. After correspondence the case was published in BZN **67**: 140–144 (2010). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on this case.

Decision of the Commission

On 1 June 2011 the members of the Commission were invited to vote on the proposals published in BZN **67**: 142. At the close of the voting period on 1 September 2011 the votes were as follows:

Affirmative votes – 21: Ballerio, Bouchet, Bogutskaya, Brothers, Fautin, Halliday, Harvey, Kojima, Krell, Lamas, Minelli, Ng, Pape, Papp, Patterson, Rosenberg, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 3: Grygier, Kottelat and Kullander.

Alonso-Zarazaga, Lim, Pyle and Štys were on leave of absence.

Voting FOR, Yanega expressed his view that simply because a taxon was not the subject of large numbers of publications does not mean it should automatically lose its standing in the face of extremely old names that have been completely forgotten (in this case, for 167 years). He felt that in this situation it should be even more so, given that a family-level name in fairly wide use is involved. Also voting FOR, Ng said that the proposals appeared to be the most parsimonious way to resolve this problem.

Voting AGAINST, Grygier said he thought that there are too few species involved in this case, none of which claimed wider interest or significance, to warrant overturning priority to conserve their genera and family: just one species of Westwood's *Chaetosoma* and three species of *Apodasya*, and only ten species currently placed in Crowson's CHAETOSOMATIDAE. Also voting AGAINST, Kullander pointed out that this case used the option in Article 23.9.3. Prevailing usage under 23.9 did not apply. However, he felt that the application did not convincingly demonstrate how the senior synonym would 'threaten stability or universality or cause confusion'. He saw this as no worse than a taxonomic move from one genus to another. He preferred that the case of the family group name homonymy should be addressed in a new application depending on the outcome of the present voting round.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

Apodasya Pascoe, 1863, *The Journal of Entomology*, **2**:54.

Chaetosoma Chevrolat, 1843, *Dictionnaire universel d'histoire naturelle ... Tome troisième.* [Livraisons 30–36]. MM. Renard, Martinet et Cie., Paris, p. 367.

Chaetosoma Westwood, 1851, *The Transactions of the Entomological Society of London*, (New Series), **1**: 171.

CHAETOSOMATIDAE Claus, 1872, *Grundzüge der Zoologie. Zum Gebrauche an Universitäten und Höheren Lehranstalten sowie zum Selbststudium. Zweite vermehrte Auflage.* N.G. Elwert, Marburg & Leipzig, p. 312.

CHAETOSOMATIDAE Crowson, 1952, *The Entomologists Monthly Magazine*, **88**: 66.

pilosum, Chaetosoma, Chevrolat, 1843, *Dictionnaire universel d'histoire naturelle ... Tome troisième.* [Livraisons 30–36]. MM. Renard, Martinet et Cie., Paris, p. 367.

scaritides, Chaetosoma, Westwood, 1851, *The Transactions of the Entomological Society of London*, (New Series), **1**: 172.

OPINION 2288 (Case 3517)

LATRIDIIDAE Erichson, 1842 (Insecta, Coleoptera): precedence given over CORTICARIIDAE Curtis, 1829, and *Corticaria* Marsham, 1802: usage conserved by designation of *Corticaria ferruginea* Marsham, 1802 as the type species

Abstract. The Commission has conserved the usage of the family name LATRIDIIDAE Erichson, 1842 by giving it precedence over the senior name CORTICARIIDAE Curtis, 1829, and conserved the current usage of the widely used name *Corticaria* Marsham, 1802 by designation of *Corticaria ferruginea* Marsham, 1802 as the type species.

Keywords. Nomenclature; taxonomy; Coleoptera; CUCUJOIDEA; LATHRIDIIDAE; LATRIDIIDAE; CORTICARIIDAE; *Corticaria*; *Lathridius*; *Latridius*; *Corticaria ferruginea.*

Ruling

(1) Under the plenary power it is hereby ruled that:
  (a) the family-group name LATRIDIIDAE Erichson, 1842 and other family-group names based on *Latridius* Herbst, 1793 are to be given precedence over CORTICARIIDAE Curtis, 1829 and other family-group names based on *Corticaria* Marsham, 1802 whenever their type genera are placed in the same family-group taxon;
  (b) all type species designations for *Corticaria* Marsham, 1802 prior to that of *Corticaria ferruginea* Marsham, 1802 by Dajoz (1975) are hereby set aside.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
  (a) *Latridius* Herbst, 1793 (gender: masculine), type species by subsequent designation by Latreille (1810) *Latridius porcatus* Herbst, 1793;
  (b) *Corticaria* Marsham, 1802 (gender: feminine), type species by subsequent designation of Dajoz (1975) *Corticaria ferruginea* Marsham, 1802, as ruled in (1) above.

(3) The name *ferruginea* Marsham, 1802, as published in the binomen *Corticaria ferruginea* (specific name of the type species of *Corticaria* Marsham, 1802), is hereby placed on the Official List of Specific Names in Zoology.

(4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:
  (a) CORTICARIIDAE Curtis, 1829, type genus *Corticaria* Marsham, 1802, with the endorsement that it and other family-group names based on *Corticaria* are not to be given priority over LATRIDIIDAE Erichson, 1842 and other family-group names based on *Latridius* Herbst, 1793 whenever their type genera are placed in the same family-group taxon;
  (b) LATRIDIIDAE Erichson, 1842, type genus *Latridius* Herbst, 1793, with the endorsement that it and other family-group names based on *Latridius* are to be given precedence over CORTICARIIDAE Curtis, 1829 and other family-

group names based on *Corticaria* Marsham, 1802 whenever their type genera are placed in the same family-group taxon.

(5) The name LATHRIDIEN Erichson, 1842 (an incorrect original spelling for LATRIDIIDAE Erichson, 1842) is hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology.

History of Case 3517

An application to conserve the usage of the CUCUJOIDEA family name LATRIDIIDAE Erichson, 1842 by giving it precedence over the senior name CORTICARIIDAE Curtis, 1829, and to conserve the current usage of the widely used name *Corticaria* Marsham, 1802 by designation of *Corticaria ferruginea* Marsham, 1802 as the type species, was received from Yves Bousquet and Patrice Bouchard (*Canadian National Collection of Insects, Arachnids and Nematodes, Agriculture and Agri-Food Canada, Ottawa, Ontario, Canada*) and Nathan P. Lord (*University of New Mexico, Albuquerque, NM, U.S.A.*) on 24 February 2010. After correspondence the case was published in BZN **67**(2): 145–150 (2010). The title, abstract and keywords of the case were published on the Commission's website. Five comments in support were published in **67**(3): 243–244.

Decision of the Commission

On 1 June 2011 the members of the Commission were invited to vote on the proposals published in BZN **67**: 147. At the close of the voting period on 1 September 2011 the votes were as follows:

Affirmative votes – 19: Ballerio, Bogutskaya, Brothers, Grygier, Halliday, Harvey, Kottelat, Krell, Kullander, Lamas, Minelli, Pape, Papp, Patterson, Rosenberg, Winston, Yanega, Zhang and Zhou.

Negative votes – 3: Fautin, Ng and van Tol.

Split votes were received from Bouchet who voted FOR: 1(b), 2, 3 and 5; AGAINST: 1(a), 4, and Kojima who voted FOR 1(b), 2 and 3 and AGAINST 1(a), 4 and 5.

Alonso-Zarazaga, Lim, Pyle and Štys were on leave of absence.

Voting FOR, Grygier said he objects to the characterization in paragraph 6 of Dajoz's (1967) type species designation for *Corticaria* as 'valid'. Grygier said that until the Commission rules otherwise, it is invalid because it was later than the valid designation by Gozis (1886). He agrees, however, that since the actual type species *Lyctus politus* is now in another genus and another family, stability will be served by replacing it. To his mind, *Dermestes longicornis* would do as well, but he defers to the applicants' preference for *C. ferruginea.* Also voting FOR, Kullander commented that this case used the option in Article 23.9.3. He said it was questionable whether the application convincingly demonstrated how the senior synonym would 'threaten stability or universality or cause confusion', as prevailing usage did not apply. However, because a relative large family is threatened with a name change, he felt that there was indeed here a need for an affirmative vote.

Voting AGAINST, Ng said that he viewed this situation as concerning a senior family name that had been used by people who applied the principle of priority, while the junior name was retained by people who either ignored or were not aware of the problem. In such a case, he was not convinced that the principle of priority needed to be compromised. As for the proposed changing of the type species, Ng was also not convinced. He felt that while keeping the current type species would change the definition of the genus as currently understood, it should not be a problem for taxonomists and after a few years, the valid concept would be broadly applied.

Bouchet split his vote, and added that the application indicated that the family name CORTICARIIDAE was definitely in use, and thus he voted in favour of priority.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

Corticaria Marsham, 1802, *Entomologia Britannica, sistens insecta Britanniae indigena, secundum methodum Linnaeanam disposita. Tomus I. Coleoptera.* Wilks & Taylor, Londini, p. 106.

CORTICARIIDAE originally introduced as CORTICARIDAE Curtis, 1829, *British entomology; being illustrations and descriptions of the genera of insects found in Great Britain and Ireland: containing coloured figures from nature of the most rare and beautiful species, and in many instances of the plants upon which they are found*, vol. 6, London, pl. 283 and unpaginated pages related to pl. 283.

ferruginea, Corticaria, Marsham, 1802 *Entomologia Britannica, sistens insecta Britanniae indigena, secundum methodum Linnaeanam disposita. Tomus I. Coleoptera.* Wilks & Taylor, Londini, p. 111.

LATHRIDIEN Erichson, 1842, *Archiv für Naturgeschichte*, **8**: 122.

LATRIDIIDAE Erichson, 1842, *Archiv für Naturgeschichte*, **8**: 122.

Latridius Herbst, 1793, *Natursystem aller bekannten in- und ausländischen Insekten, als eine Fortsetzung der von Büffonschen Naturgeschichte. Der Käfer. Fünfter Theil. Mit 16 illuminirten Kupfertafeln.* J-N. Joachim Pauli, Berlin, p. 2.

OPINION 2289 (Case 3476)

Dialictus Robertson, 1902 and *Evylaeus* Robertson, 1902 (Insecta, Hymenoptera): proposed precedence not granted

Abstract. A request to give the widely used halictine bee generic names *Dialictus* and *Evylaeus*, both proposed by Robertson (1902), precedence over the rarely used but older names *Hemihalictus* Cockerell, 1897, *Sudila* Cameron, 1898 and *Sphecodogastra* Ashmead, 1899 whenever either of the former is considered to be a synonym of any of the latter has not been supported by the Commission.

Keywords. Nomenclature; taxonomy; Hymenoptera; HALICTIDAE; *Dialictus*; *Evylaeus*; *Paralictus*; *Hemihalictus*; *Sudila*; *Sphecodogastra*; *Lasioglossum*; *Dialictus anomalus*; *Evylaeus arcuatus*; *Paralictus cephalicus*; *Hemihalictus lustrans*; *Sudila bidentata*; *Sphecodogastra texana*; halictine bees; sweat bees; cosmopolitan.

Ruling

(1) A request to give precedence to the halictine bee generic names *Dialictus* and *Evylaeus*, both proposed by Robertson (1902), over the older names *Hemihalictus* Cockerell, 1897, *Sudila* Cameron, 1898 and *Sphecodogastra* Ashmead, 1899 has not been supported by the Commission.

(2) No names are placed on the Official Lists or Indexes in this ruling.

History of Case 3476

An application to conserve standard usage of the widely used halictine bee generic names *Dialictus* and *Evylaeus*, both proposed by Robertson in 1902, by giving precedence over the rarely used but older names *Hemihalictus* Cockerell, 1897, *Sudila* Cameron, 1898 and *Sphecodogastra* Ashmead, 1899 whenever these names are considered to be synonyms, was received from Jason Gibbs (*York University, ON, Canada*), John S. Ascher (*American Museum of Natural History, New York, NY, U.S.A.*) and Laurence Packer (*York University, ON, Canada*) on 6 October 2008. After correspondence the case was published in BZN **66**(2): 147–158 (2009). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on this case. The Case was originally sent for vote on 1 June 2010 (VP 12). A majority of Commissioners voted FOR the Case (13 For, 10 Against, 1 Split), but it failed to meet the two-thirds majority required for approval. In accordance with the bylaws, the case was sent for a revote, with a modified set of proposals as follows:

The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to rule that the names *Dialictus* Robertson, February 1902 and *Evylaeus* Robertson, September 1902 be given priority over *Hemihalictus* Cockerell, 1897, *Sudila* Cameron, 1898 and *Sphecodogastra* Ashmead, 1899 whenever either of the former is considered to be a synonym of any of the latter;

(2) to emend the entry on the Official List of Generic Names in Zoology for the following name: *Dialictus* Robertson, 1902 (gender: masculine) (type species, by original designation and monotypy: *Halictus anomalus* Robertson, 1892), with the endorsement that it is to be given precedence over *Hemihalictus* Cockerell, 1897, *Sudila* Cameron, 1898 and *Sphecodogastra* Ashmead, 1899 in addition to *Paralictus* Robertson, 1901, whenever it and any of the other three are considered to be synonyms;

(3) to place on the Official List of Generic Names in Zoology the following names:
  (a) *Evylaeus* Robertson, 1902 (gender: masculine), type species by original designation *Halictus arcuatus* Robertson, 1893, with the endorsement that it is to be given precedence over *Hemihalictus* Cockerell, 1897, *Sudila* Cameron, 1898 and *Sphecodogastra* Ashmead, 1899 whenever it and any of the other three are considered to be synonyms;
  (b) *Hemihalictus* Cockerell, 1897 (gender: masculine) (type species by original designation and monotypy *Panurgus lustrans* Cockerell, 1897), with the endorsement that it is not to be given priority over *Dialictus* Robertson, 1902 or *Evylaeus* Robertson, 1902 when it is considered to be a synonym of either;
  (c) *Sudila* Cameron, 1898 (gender: feminine) (type species by designation of Sandhouse, 1943 *Sudila bidentata* Cameron, 1898), with the endorsement that it is not to be given priority over *Dialictus* Robertson, 1902 or *Evylaeus* Robertson, 1902 when it is considered to be a synonym of either of them;
  (d) *Sphecodogastra* Ashmead, 1899 (gender: feminine) (type species by monotypy and original designation *Sphecodes texana* Cresson, 1872), with the endorsement that it is not to be given priority over *Dialictus* Robertson, 1902 or *Evylaeus* Robertson, 1902 when it is considered to be a synonym of either;

(4) to place on the Official List of Species Names in Zoology the following names:
  (a) *cinctipes* Provancher, 1888, as published in the binomen *Halictus cinctipes*, senior subjective synonym of *Halictus arcuatus* Robertson, 1893 (valid specific name of the type species of *Evylaeus* Robertson, 1902);
  (b) *lustrans* Cockerell, 1897, as published in the binomen *Panurgus lustrans* (specific name of the type species of *Hemihalictus* Cockerell, 1897);
  (c) *bidentata* Cameron, 1898, as published in the binomen *Sudila bidentata* (specific name of the type species of *Sudila* Cameron, 1898);
  (d) *texana* Cresson, 1872, as published in the binomen *Halictus texana* (specific name of the type species of *Sphecodogastra* Ashmead, 1899).

Since Case 3476 was published, a revision of the metallic species of *Lasioglossum* (*Dialictus*) in Canada (Hymenoptera, HALICTIDAE, HALICTINI) was published in *Zootaxa*, **2591**: 1–382 (2010).

Decision of the Commission

On 1 June 2011 the members of the Commission were invited to vote on the modified proposals as above (original proposals published in BZN **66**: 154–155). At the close of the voting period on 1 September 2011 the votes were as follows:

Affirmative votes – 13: Ballerio, Brothers, Fautin, Grygier, Halliday, Harvey, Pape, Papp, Rosenberg, Winston, Yanega, Zhang and Zhou.

Negative votes – 11: Bogutskaya, Bouchet, Kojima, Kottelat, Kullander, Krell, Lamas, Minelli, Ng, Patterson and van Tol.

Alonso-Zarazaga, Lim, Pyle and Štys were on leave of absence.

Voting AGAINST, Bouchet said he stood with the comments he made on the first round: The proposals offered for vote were, in his opinion, a recipe for long-term nomenclatural instability. In the short term, as all the names involved were in use, application of priority would admittedly disrupt some habits, but then stability will not be impacted by taxonomic opinions. Also voting AGAINST, Kojima commented that with these proposals the authors seemed to support their taxonomic opinions rather than seeking to promote nomenclatural stability. Kullander, voting AGAINST, said this was a very long and complex application. Under item 10 it said that 'Current usage of the names *Dialictus* and *Evylaeus* results in a nomenclatural problem...' Consequently, his impression was that priority should be preferred in a group with dynamic taxonomy. Usage of *Dialictus* seemed limited (122 uses in ISI Web of Knowledge, August 2011), as was that of *Evylaeus* (154 uses). The plethora of subgenera looked less preferable than the older synonyms. Ng, voting AGAINST, said he had originally voted FOR but after talking with more entomologists and re-reading the Case, he was inclined to change his vote. He agreed that the Case was complicated and there were a large number of names involved; but the taxonomy was changing. He did not see clearly how a positive decision by the Commission would be helpful when taxonomy was unresolved and that any vote at this stage was perhaps premature.

No names are placed on the Official Lists or Indexes in this ruling.

Notice of closure of Cases

The following Cases, for which receipts as new applications to the Commission were published though the cases were never published in full, are now closed:

Terebella infundibulum Renier in Meneghini, 1847 (currently *Myxicola infundibulum*; Polychaeta; SABELLIDAE): proposed conservation of the specific name. A.I. Muir & M.E. Petersen (Case 3534; acknowledgement of receipt published in BZN **67**: 269).

Nereis coccinea Renier in Meneghini, 1847 (currently *Lumbrineris coccinea*) and *Thalassema scutatum* Renier in Ranzani, 1817 (currently *Sternaspis scutata*; Annelida, Polychaeta): attribution of authorship. A.I. Muir & M.E. Petersen (Case 3535; acknowledgement of receipt published in BZN **67**: 269).

Heterohelix (Foraminiferida, HETEROHELICIDAE): proposed suppression. M.D. Georgescu (Case 3545; acknowledgement of receipt published in BZN **68**: 2).

Macropsalis fabulosa Phillipps & Grimmett, 1932 (Arachnida, Opiliones, PHALANGIOIDEA): proposed replacement of the neotype. C.K. Taylor & M.S. Harvey (Case 3549; acknowledgement of receipt published in BZN **68**: 2).

Orithyia Fabricius, 1798 (Crustacea, Decapoda, Brachyura): proposed precedence over *Orithuja* Weber, 1795. P.K.L. Ng, D. Guinot & P.J.F. Davie (Case 3551; acknowledgement of receipt published in BZN **68**: 2).

Protoretepora de Koninck, 1878 (Bryozoa, Fenestrata): proposed designation of *Protoretepora crockfordae* Wyse Jackson, Reid & McKinney, 2011 as the type species. P.N. Wyse Jackson, C.M. Reid & F.K. McKinney (Case 3556; acknowledgement of receipt published in BZN **68**: 93).

Archaeopteryx lithographica von Meyer, 1861 (Aves): proposed correction to Opinion 607. J. Mílkovský (Case 3562; acknowledgement of receipt published in BZN **68**: 94). This case correcting the page reference for the name *Archaeopteryx lithographica* was received and circulated before the vote as a comment on Case 3390 and included in Opinion 2283 (BZN **68**: 230–231).

Best practice in the use of the scientific names of animals: Support for editors of technical journals

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1. Introduction

The International Commission on Zoological Nomenclature, also known as the ‘ICZN’ and ‘the Commission’, supports editors of technical journals in applying best practice to zoological nomenclature.

This paper brings together selected topics of relevance to editors based on mentions of editors in the Code and experience of recent enquiries received by the ICZN Secretariat. It is necessarily technical but includes selected examples. Some topics could not be covered in detail but the Commission website has the complete and authoritative text of the 4th edition of the International Code of Zoological Nomenclature, also known as ‘the Code’, and a selection of FAQs:

What is the remit of the ICZN?; What is the code?; How should zoological names be written?; What are type specimens for?; What is the difference between availability and validity of names?; I think I have a new species, how can I get it named?; If a name is incorrectly spelled, what do I do?; What are the critical works in zoological nomenclature?; Who is the type of *Homo sapiens*?; Is there such thing as ‘page priority’?; What is the status of ZooBank and registration?; Selling scientific names; Should I use Phylocode?; What is the status of the ICZN ruling on electronic-only publication of nomenclatural acts?; How can I help the ICZN?

We advise editors to state that nomenclature must follow the 4th edition of the Code (1999) in your instructions to authors. We recommend that you cite the web address of the Commission where the online version of the Code can be accessed: http://iczn.org.

Please make enquiries through the Commission’s website: http://iczn.org.

2. The Commission and the Code

The Commission acts as adviser and arbiter for the zoological community mainly by producing the International Code of Zoological Nomenclature or ‘the Code’ – the set of rules for the scientific names of animals – and by resolving nomenclatural problems. The main purpose of the Code is to facilitate the communication of scientists by ensuring the stability and universality of zoological names. The introductory sections of the Code are worth reading for a general overview and the rules or ‘Articles’ of the Code are supplemented by ‘Recommendations’ which are advisory, not mandatory. Occasionally in specific cases where the precise application of the rules would threaten stability of nomenclature or cause confusion, the Commission has the power to issue rulings, called ‘Opinions’ or ‘Declarations’, suspending or modifying the rules in order to resolve the problem.

The Code does not regulate vernacular (common) names, nor does it regulate taxonomists in subjective matters of taxonomic judgement. For example, the choice of which classification is correct for a particular group of animals is entirely a matter for taxonomists.

3. General advice

To ensure effective peer review of taxonomic papers, we recommend that journals include expertise in zoological nomenclature among the editorial board and that this is considered when selecting reviewers. ICZN Commissioners can be approached to serve on editorial boards; a list of current Commissioners can be found here: http://iczn.org/commissioners.

Editors should avoid publishing material which appears to contain any discourtesy, or potentially offensive behaviour, or language (Appendix A: Code of Ethics).

The Code does not yet recognise electronic publication (see section 9 below for more details)

The Commission does not recognise the Phylocode and, to avoid confusion, recommends that the Phylocode is not used for publishing zoological names and nomenclatural acts.

4. Key concepts

Some words used in nomenclature have technical definitions which differ from their everyday meanings; definitions are found in the Glossary of the Code. Key concepts are:

Binominal names – Editors should ensure scientific names of animals are written following the Principle of binominal nomenclature (Article 5) so they can be easily recognised as such. *See section 5 below for more on the format of names.*

Publication – For the purposes of the Code, publication is the issuing of a work: a) as a permanent scientific record; b) obtainable free of charge or by purchase; and c) simultaneously in numerous durable identical copies (Articles 8, 9). Published works have authorship (Chapter 11) and date (Chapter 5). Valid publication is a requirement for the availability of names. Authors, editors or publishers may disclaim their own published works for the purposes of nomenclature (Article 8.3) if they do not wish new names to become available. Establishing publication dates is essential to determine the precedence of names which are synonyms or homonyms. *See below for more details on publication (section 6) and electronic publication (section 9).*

Availability – Taxonomic papers commonly include descriptions of new taxa and the establishment of new names for the newly described taxa. Availability is a status which a name must gain before it is taken into account as a part of zoological nomenclature (Chapter 4). Names that are not available effectively do not exist for the purposes of zoological nomenclature and cannot be used. Names should be unique, unambiguous and universal and formed following precise rules (Formation of names, Chapter 7). Names are based on name-bearing types, the objective standard of reference for the application of scientific names of animals (Chapter 16). *See section 7 below for more details on availability and the publication of new names.*

Nomenclatural Acts – Published acts which affect the nomenclatural status of a scientific name or the typification of a nominal taxon.

5. Format of names – how to write names correctly

Standard formats for names

- Following the Principle of Binominal Nomenclature (i.e. composed of two names) a species name or 'binomen' is a combination of a genus name (such as *Apis*) and a specific name (such as *mellifera*). The genus name is first, and must start with an upper-case letter, the specific name second, starting with a lower-case letter (Article 28; Appendix B.6). This shows the hierarchy between genus and species; a genus may include a number of different species. A subspecies name follows the specific name of the species. A subgenus name is placed in parentheses between the name of the genus and the specific name.

- Citing the author and date of publication is optional but often advisable (Article 51) and is added after the binominal name – *Apis mellifera* Linnaeus, 1758. This helps to avoid confusion between similar names and allows readers to find the original description.

Use of italics – Binomens (genus and specific names) are conventionally written in italics (or other contrasting typeface) to distinguish the name from surrounding text. This is advisable, although not mandatory (Appendix B.6). Subgenera and subspecies are treated similarly. Family-group names, including superfamily, family, subfamily, tribe and subtribe, are not italicised.

Alphabets and symbols that can be used – Only the 26-letters of the Latin alphabet a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z are used for scientific names of animals (Article 11.2). Usually the spelling in the original description is followed (Article 32), but accents or other marks, such as 'é', 'ø', 'ü', must be corrected by later users; gaps, apostrophes and hyphens are removed (except where the first element is a Latin letter used to describe a character of the taxon, e.g. *c-album*, Article 32.5.2.4.3) and numbers spelled out in letters (Article 32.5.2).

Shortening names to save space

- After its first mention in a work (excepting the title) the genus name in a binominal name can be shortened to one or more letters (Appendix B.11) for example, *Apis mellifera* can be written as *A. mellifera*. Two- (or more) letter abbreviations may be used when using two genus names with the same initial letter(s), e.g. *Ae.* for *Aedes* and *An.* for *Anopheles*, as they are often discussed in the same work.
- It is advisable to write a species name with its author(s) and date at least once in a work (Recommendation 51A; Appendix B.10), usually on first mention. The author and date can be omitted elsewhere if this will not cause confusion.
- The names of authors of scientific names are not usually abbreviated, however when a name was published by more than three authors, the name of the first author (as given in the original publication) may be cited alone in the text and followed by the term 'et al.' (from Latin meaning 'and others'); the full names of all the authors should be cited in the bibliography (Appendix B.12) when practical.

Use of brackets around author name – If a species has been transferred to a genus other than the one in which it was originally described, the original author's name and date are put in parentheses (curved brackets). The lion, for example, was originally described by Linnaeus as *Felis leo*, in full *Felis leo* Linnaeus, 1758, but as knowledge of the cat family developed the genus *Felis* was split, the lion was placed in the new genus *Panthera*, and so the name is now *Panthera leo* (Linnaeus, 1758) (Article 51.3).

Punctuation of names – Apart from a parenthesis there must be no other punctuation between the species name and the name of the original author (Article 51.2). However, punctuation can be used to indicate a citation (Article 51.2.1), for example, *Apis mellifera* Linnaeus, 1758 was originally named by Linnaeus in a book published in the year 1758, whereas, *Apis mellifera*: Michener, 2000 or *Apis mellifera,* sensu Michener, 2000, means the bee species *Apis mellifera* as later referred to by Michener (2000), thus helping to avoid confusion over who is the original author of a name.

Basing a specific name on a personal name – A specific name based on a personal name should follow Latin grammar; it may be a noun in the genitive case, a noun in apposition (nominative case) or an adjective or participle (Article 31). A noun in the genitive case is formed by adding a standard ending to the name or to the stem of the name if the Latin equivalent of the personal name is used. The standard endings are *-ae* for a woman, *-i* for a man, *-arum* for more than one woman, *-orum* for more than one man or a mixed group. The standard endings *–ensis*, *-ense* are used for place names, and not personal names. A Latin equivalent for a personal name can be used. Names in languages using non-Latin characters must be transliterated into Latin characters. Care should be taken because incorrectly formed names usually cannot be changed afterwards (Articles 32, 34). Examples are given in Table 1 below.

Table 1. Basing a specific name on a personal name

Personal name	Latinized?	Name or stem of name	Gender ending	Specific name
Margaret	No	margaret-	-ae	*margaretae*
Margaret	Margarita *or* Margaretha	margarit- *or* margareth-	-ae	*margaritae* or *margarethae*
Karl	No	karl-	-i	*karli*
Karl	Carolus *or* Karlius	carol- *or* karli-	-i	*caroli* or *karlii*
Margaret Smith	No	smith-	-ae	*smithae*
Karl Smith	No	smith-	-i	*smithi*
Margaret and Jane Smith	No	smith-	-arum	*smitharum*
Karl and John Smith	No	smith-	-orum	*smithorum*
Margaret and Karl Smith	No	smith-	-orum	*smithorum*
Margaret Smith	Smithia	smithi-	-ae	*smithiae*
Karl Smith	Smithius	smithi-	-i	*smithii*
Margaret & Jane Smith	Smithiae	smithi-	-arum	*smithiarum*
Karl & John Smith	Smithii	smithi-	-orum	*smithiorum*
Margaret & Karl Smith	Smithii	smithi-	-orum	*smithiorum*

We do not recommend nouns in apposition because the ending of the specific name is unchanged, and could easily be confused with an author's name (Recommendation 31A). Do not use a name which may give offence (Appendix A); authors should check that living persons agree with the way their name is to be used.

6. Publication of works on paper and other durable media

Authors, editors and publishers have a responsibility to ensure that works containing new names or nomenclatural acts are self-evidently published within the meaning of the Code. Works should contain the date of publication, and information about where copies may be obtained (Recommendation 8D).

Desirability of works on paper – We strongly urge authors and publishers to ensure new scientific names or nomenclatural acts are first published in a work printed on paper (Recommendation 8B).

Wide dissemination – Authors and editors should widely publicise new scientific names, nomenclatural acts, and information affecting nomenclature. This can be by publication in appropriate scientific journals or well-known monographic series and by ensuring new names are entered into *Zoological Record*. This is most easily done by sending a copy of the work to the *Zoological Record* (Recommendation 8A; Appendix B.9) published by Thomson Reuters.

Public accessibility of published works – Copies of published works which contain new scientific names or nomenclatural acts should be permanently conserved in public libraries (Recommendation 8C).

Inclusion of disclaimers – Works that are not issued for public and permanent scientific record (such as symposium abstracts, or notices of papers to be delivered at a meeting, minutes, etc.) are not valid publications and do not make names and taxonomic acts available. To avoid confusion, authors, editors and publishers should not include in these kinds of publications information that appears to make new names and taxonomic acts available. If names and acts must be included in these kinds of documents, editors should ensure that they contain a disclaimer (Article 8.2), for instance 'This work is not issued for the purpose of zoological nomenclature', so that the names and acts are clearly not available and do not enter zoological nomenclature unintentionally (Recommendations 8E). Disclaimers can also be used to avoid unintentional publication in works which are validly published but which are not intended to be used for the publication of zoological names (Recommendation 9A).

Completeness of descriptions of new taxa – Editors should ensure that the whole of the description and illustrations relating to a new nominal taxon, and particularly any nomenclatural acts or data needed to confer availability on its name, are published in the same work and on the same day (Recommendation 10A). This is particularly important in cases where supplementary information is removed from hard-copy publications and published online only, as electronic publications are not valid and the availability of a name will depend only on what is published in the hard copy. Publishing nomenclaturally critical information in a supplemental source risks making the name unavailable and can create confusion for later users of the name.

Specification of date Editors or publishers should state the day of publication of a work, and of each component part of a serial publication. In a volume made up of parts brought out separately, the day of publication of each separate part, including pages, plates, maps, etc. that constitute it, should be specified (Recommendation 21C).

Bibliographic information on separates and preprints – An author, editor or publisher should ensure that a 'separate' (reprint or offprint) contains a complete bibliographic citation of the original work (including its date of publication) and has the same pagination as that work. Preprints, with their own date of publication, should be identified clearly as such (Recommendation 21E).

Publication on specified date – An author, editor or publisher should not publish, permit to be published, or distribute a work, in whole or in part, for the first time other than on the specified date of publication. An author who receives separates before the specified date of publication should not distribute them until the work has been published (Recommendation 21A).

Correction of date – An author or publisher of a new scientific name or other nomenclatural act who is aware that the date specified in the work containing it is incorrect or incomplete should publish a correction (Recommendation 21F).

Recent changes to the Code affecting publication

- A work not printed on paper issued after 1999 in numerous identical, durable and unalterable copies (such as read-only laser disks) is published if the work itself contains a statement that copies (in the form in which it was published) have been deposited in at least five major publicly accessible libraries named in the work itself (Article 8.6). The deposition of paper copies is not required in this case. This article does not apply to non-durable electronic media which are not published works (Article 9.8).
- Hence the following are not validly published: (a) electronically distributed text or illustrations, such as e-mails, PDFs or web-pages; (b) downloaded copies or printouts of these; (c) abstracts of papers, posters, lectures, etc., issued at congresses, symposia and other meetings but not otherwise published; (d) offprints (separates) distributed after 1999 before the date of publication specified in the work (Article 9).
- Deposition of paper print-outs of PDFs in libraries does not make the original PDF a published work, but the paper print-out may become a published work in its own right provided it meets the criteria of publication for works printed on paper. This is not advisable as a method of publication; traditional hard-copy scientific journals are better as they usually have wider dissemination and a more durable format.

7. Publication of new species names

Authors, editors and publishers are responsible for ensuring that names are self-evidently made available within the meaning of the Code. To become available, new names must be published following the criteria in Articles 1.3 & 10–20. The criteria have become stricter over time, reflecting improved standards. Some of the main criteria currently are:

- Names must be spelled with the 26 letters of the Latin alphabet – accents and upper case letters at the beginning of specific names do not make names unavailable but must be corrected (Article 11.2).
- Binominal nomenclature must be used (Article 11.4).
- Specific names must contain two or more letters (Articles 11.8–9).
- Specific names must be published in combination with a genus name (Articles 11.9).
- There must be a description that is meant to distinguish the taxon from other taxa, or a reference to a previously published description, or the name must be expressly proposed as a new replacement name for an older available name (Article 13).
- Anonymously published names are not available (Article 14).
- Names published for varieties or forms are not available (Article 15).
- New names must be indicated as new (Article 16).
- Types must be fixed for species names (Article 16).
- Names are not available if proposed for:

- things which are not living or extinct animals (or their fossils or works);
- hypothetical concepts;
- teratological specimens as such;
- hybrid specimens;
- taxa below the rank of subspecies;
- temporary reference (not for formal taxonomic use);
- the works of extant animals, such as nests and tracks.

See Articles 1.1, 1.2, 1.3, 10.2, 13.6

- For example, the name '*Nessiteras rhombopteryx*', coined for the mythical Loch Ness Monster by Sir Peter Scott & Robert Rines (1975) *Nature* 258: 466–468, is unavailable because it does not refer to a living or extinct animal, and is a hypothetical concept. The name is an anagram of 'Monster hoax by Sir Peter S'. Journal editors beware!

Recent changes to the Code affecting the availability of new names – A new species-group name published after 1999 is not made available unless:

- it is explicitly indicated as being new (preferably by the use of a term such as 'sp. nov.' or by a directly equivalent term in the language in which the paper is written) (Article 16.1);
- its name-bearing type is fixed (a holotype or expressly indicated syntypes) (Article 16.4.1);
- if the name-bearing type of a species-group taxon proposed after 1999 is a preserved specimen or specimens, the author includes a statement with the name and location of the collection where the name-bearing type is or will be deposited (Article 16.4.2).

General advice on the establishment of new names

- An author, when drawing up the description of a new nominal taxon, should include comparisons with similar taxa to assist later identification of the taxon, and illustrate name-bearing types (Appendix B.3).
- An author establishing a new nominal taxon should state the higher (more inclusive) taxa (such as family, order and class) to which the taxon is assigned (Appendix B.4).
- An author establishing a new species-group name should state its etymology. New names should be in Latin form; they should be euphonious and easily memorable, and should not be liable to confusion with those of other taxa of any rank, or with vernacular words (Appendix B.5).
- If a new nominal taxon is established in a work written in a language which is not in wide international use for scientific purposes, the work should include an abstract which draws attention to the new name and is written in a widely used language (Appendix B.7).
- New names should be established in a work which is printed on paper, which has a wide circulation, and which zoologists would not regard as unlikely to contain new names in the taxonomic field concerned. Names should be established in the main text of the work, not in keys, tables, abstracts, footnotes or similar items (Appendix B.8).

Citation of names – A name should not be cited before its intended establishment (see also Appendix A, the 'Code of Ethics'), and should not be called 'new' except at the time of its establishment (Appendix B.10).

Further advice on nomenclatural and taxonomic aspects of describing new species can be found in the following works:

- Taylor, M. *et al.* 2011. Checklist for new zoological genus and species names: http://svpow.wordpress.com/checklist-for-new-zoological-genus-and-species-names-draft/
- Winston, J.E. 1999. *Describing species: Practical taxonomic procedure for biologists. 518 pp.* Columbia Univ. Press.

8. Lectotype designations

Lectotype designations must now contain an express statement of deliberate designation (Article 74.7.3, as amended by Declaration 44), such as 'lectotype hereby designated'.

9. The future for electronic publication

Electronic publication, e.g. PDFs and web pages, is currently not valid for the purposes of nomenclature, and hard copy is still required. However, recognising the increasing importance of electronic publication, the Commission has issued a proposed amendment to the Code that outlines ways to allow publication of nomenclatural acts in electronic-only journals, but not on websites or other transient electronic media. This was published in a range of journals and available for public input for a year, then submitted to the IUBS at its meeting in Cape Town, South Africa, in November 2009, where it was ratified in principle. Further discussion is ongoing, with a decision from the Commission anticipated soon. http://iczn.org/content/availability-electronic-publication.

So, for journals comprising electronic and paper versions, the availability of acts, names, and dates of publication is currently defined only by the paper version. We recommend that editors of electronically published journals who wish to make the nomenclatural acts contained in them valid/available follow the joint approach for providing paper copies agreed by ICZN and the Public Library of Science: Information and guidelines for PLoS authors submitting a new taxon name (zoological nomenclature only) at: http://www.plosone.org/static/guidelines.action.

We also recommend that electronic preprints are not circulated as there is a danger that names and nomenclatural acts may be inadvertently or unscrupulously published by third parties who copy and publish the content in print form before the official publication of the paper copy. Hence posting electronic preprints is not good practice for nomenclatural works.

The Commission supports open access of electronic publications, e.g. following the principles of the Creative Commons license (creativecommons.org).

10. ZooBank and the registration of names

ZooBank is a Commission website for the registration of the following:

- *Nomenclatural Acts* – published usages of scientific names of animals, which affect the nomenclatural status of a scientific name or the typification of a nominal taxon;
- *Publications* – publications that contain nomenclatural acts, as defined above;
- *Authors* – names of authors of publications, as defined above;

- *Type Specimens* – type specimens for zoological names. The registration of types is provisional, with the expectation that natural-history collections holding types will implement their own registries, to which ZooBank will link.

ZooBank is currently functional, and is in a phase of rapid improvement (see http://www.zoobank.org). Names and acts can be registered and LSIDs are assigned for each registered component. Input is currently via a small number of editors; the interface is expected to allow greater public access in late 2011. Development is proceeding in partnership with the development of the Global Names Architecture (see http://www.globalnames.org/). The Commission's ZooBank Committee formulates policies for ZooBank. If you have a nomenclatural act you would like to register, or would like to become a data editor to allow you to enter multiple registrations, please contact Richard Pyle (deepreef@bishopmuseum.org).

Registration is advised for new names. It is likely to become mandatory for names in electronic-only publications if the amendment on e-only publication passes (e-only publication is not currently valid, see above). Your input on ZooBank is welcome.

11. Sources of information and advice

The full and authoritative text of the Code, FAQs and much more can be found on the Commission's website: http://iczn.org.

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Cover image: *Paradisaea rubra* Daudin, 1800, red bird-of-paradise, an endemic, near-threatened species from the north-west Papuan Islands of Waigeo, Batanta, Gemien and Saonek. The detail is from Plate 31 of John Gould's '*Birds of New Guinea*,' vol. 1 (1875–1888). (The original image is a colour lithograph © Natural History Museum, London). The inscription on the image says '*Paradisea sanguinea Shaw*'. The name *Paradisaea sanguinea* Shaw, 1809 is a junior synonym of *Paradisaea rubra* Daudin, 1800. Note the correct spelling of the name *Paradisaea*, ruled upon by the Commission (the Opinion is published in BZN **69**(1)).

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

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Notices

(1) Applications and correspondence relating to applications to the Commission should be sent to the Executive Secretary at the address given on the inside of the front cover and on the Commission website. English is the official language of the *Bulletin*. Please take careful note of instructions to authors (present in a one or two page form in each volume and available online (at http://iczn.org/content/guidelines-case-preparation) as incorrectly formatted applications will be returned to authors for revision. The Commission's Secretariat will answer general nomenclatural (as opposed to purely taxonomic) enquiries and assist with the formulation of applications and, as far as it can, check the main nomenclatural references in applications. Correspondence should be sent by e-mail to 'iczn@nhm.ac.uk' where possible.

(2) The Commission votes on applications eight months after they have been published, although this period is normally extended to enable comments to be submitted. Comments for publication relating to applications (either in support or against, or offering alternative solutions) should be submitted as soon as possible. Comments may be edited (see instructions for submission of comments at http://iczn.org/content/instructions-comments).

(3) Requests for help and advice on the Code can be made direct to the Commission and other interested parties via the Internet. Membership of the Commission's Discussion List is free of charge. You can subscribe and find out more about the list at http://list.afriherp.org/mailman/listinfo/iczn-list.

(4) The Commission also welcomes the submission of general-interest articles on nomenclatural themes or nomenclatural notes on particular issues. These may deal with taxonomy, but should be mainly nomenclatural in content. Articles and notes should be sent to the Executive Secretary.

New applications to the Commission

The following new applications have been received since the last issue of the *Bulletin* (volume 68, part 4, 20 December 2011) went to press. Under Article 82 of the Code, the existing usage of names in the applications is to be maintained until the Commission's rulings on the applications (the Opinions) have been published.

CASE 3580: *Exechocentrus lancearius* Simon, 1889 (Arachnida, Araneae, ARANEIDAE): replacement of the holotype by designation of a neotype. N. Scharff & G. Hormiga.

CASE 3581: *Turbo bidens* Linnaeus, 1758 (Mollusca, Gastropoda, CLAUSILIIDAE): request for setting aside the neotype designated in 2009. F.W. Welter-Schultes.

CASE 3582: *Scaris* Le Peletier & Serville, 1825 (Insecta, Hemiptera, CICADELLIDAE): proposed suppression of the genus name and all family-group names based on it. M.W. Nielson, P.H. Freytag & S.H. McKamey.

CASE 3583: *Reticulitermes flavipes* Clément et al., 1985 and related subspecific names (Insecta, Isoptera, RHINOTERMITIDAE): proposed suppression. C.D.R. Stephen & X.P. Hu.

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The International Trust for Zoological Nomenclature (the Trust) was founded in 1947 to manage the Commission's financial matters. It is a registered charity, based in the U.K. (No. 211944). At present, the Trust consists of 25 members from 13 countries. Discussion of the Trust's activities can be found in BZN **60**: supplement, pp. 1–12 (March 2003).

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Candidate Part of List of Available Names (LAN) for species in the phylum Rotifera – period of public commentary begins

Following Article 79 of the Code (Chapter 17 http://www.nhm.ac.uk/hosted-sites/iczn/code/), a committee of experts developed a *Candidate Part of the List of Available Names* for species of Rotifera from the start of zoological nomenclature to the year 2000. Details of how the *Candidate Part* was assembled are described in *Zootaxa* **3179**: 61–68 (2012) by the expert rotifer taxonomy committee of H. Segers, W.H. De Smet, C. Fischer, C. Fontaneto, E. Michaloudi, R.L. Wallace & C.D. Jersabek (http://www.mapress.com/zootaxa/2012/f/zt03179p068.pdf). Following Article 79, the *Candidate Part* is available for a year to receive public comment. Comments on the list may be made on a dedicated set of webpages at http://iczn.org/lan/rotifer, or by direct correspondence with the ICZN Secretariat (iczn@nhm.ac.uk). The year of comment begins on 31 March 2012.

The *Candidate Part* is divided into two sections. Section A includes names that are proposed to be included in the *List of Available Names*; Section B includes names of rotifers that are proposed not to be included in the LAN for reasons described in *Zootaxa* **3179**: 61–68 (2012). Comments are invited on both sections.

Case 3548

A proposal for the treatment of *Mémoires pour servir à l'histoire des insectes* by De Geer (1752–1778) and the additional volume by Retzius (1783)

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Abstract. We analysed the eight volumes of *Mémoires pour servir à l'histoire des insectes*, published between 1752 and 1778 by De Geer, and an additional volume published by Retzius in 1783. We found that none of these works was consistently binominal. A great number of names of taxa of many insect and other arthropod groups that were established in those works are currently widely accepted and used, and regarding them as unavailable would cause an unnecessary amount of confusion and taxonomical instability. De Geer (1752) is a pre-Linnaean publication and the two parts of volume 2 (1771a, b) did not contain any Latin names. We propose that the works published by De Geer (1773, 1774, 1775, 1776, 1778) and Retzius (1783) be ruled to be available as binominal works and 140 polynominal names mentioned therein be suppressed, mostly for being identified as polynominal. Among the polynominal names included in these volumes were the very commonly used names for human lice (*Pediculus humanus capitis* and *P. humanus corporis*) which De Geer regarded as different species, not as subspecies of *P. humanus*. We suggest that *P. h. capitis* be considered available and that *P. h. corporis* be suppressed (the latter being commonly regarded as a synonym of *P. h. humanus* Linnæus, 1758 in modern biology and medicine). Generic names established as compound words connected with a hyphen should generally be regarded as binominal and available, but we propose to suppress De Geer's spider names *Aranealupus, Araneaphalangium* and *Araneacancroides* for the purposes of the Principle of Priority, but not for those of the Principle of Homonymy.

Keywords. Nomenclature; taxonomy; early zoological literature; Arthropoda; Insecta; Chelicerata; De Geer; Retzius.

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1. *Mémoires pour servir à l'histoire des insectes* was a multivolume work published in eight volumes between 1752 and 1783 by the Swedish naturalist Carl De Geer (*1720, †1778) (volumes 1–7) and the Swedish naturalist Anders Jahan Retzius (*1742, †1821) (volume 8). De Geer published the first volume of the *Mémoires* in 1752, it therefore was a pre-Linnean work (Article 3.2). All names of taxa in this and